

FIGURE 7 b



*Back of Figure*



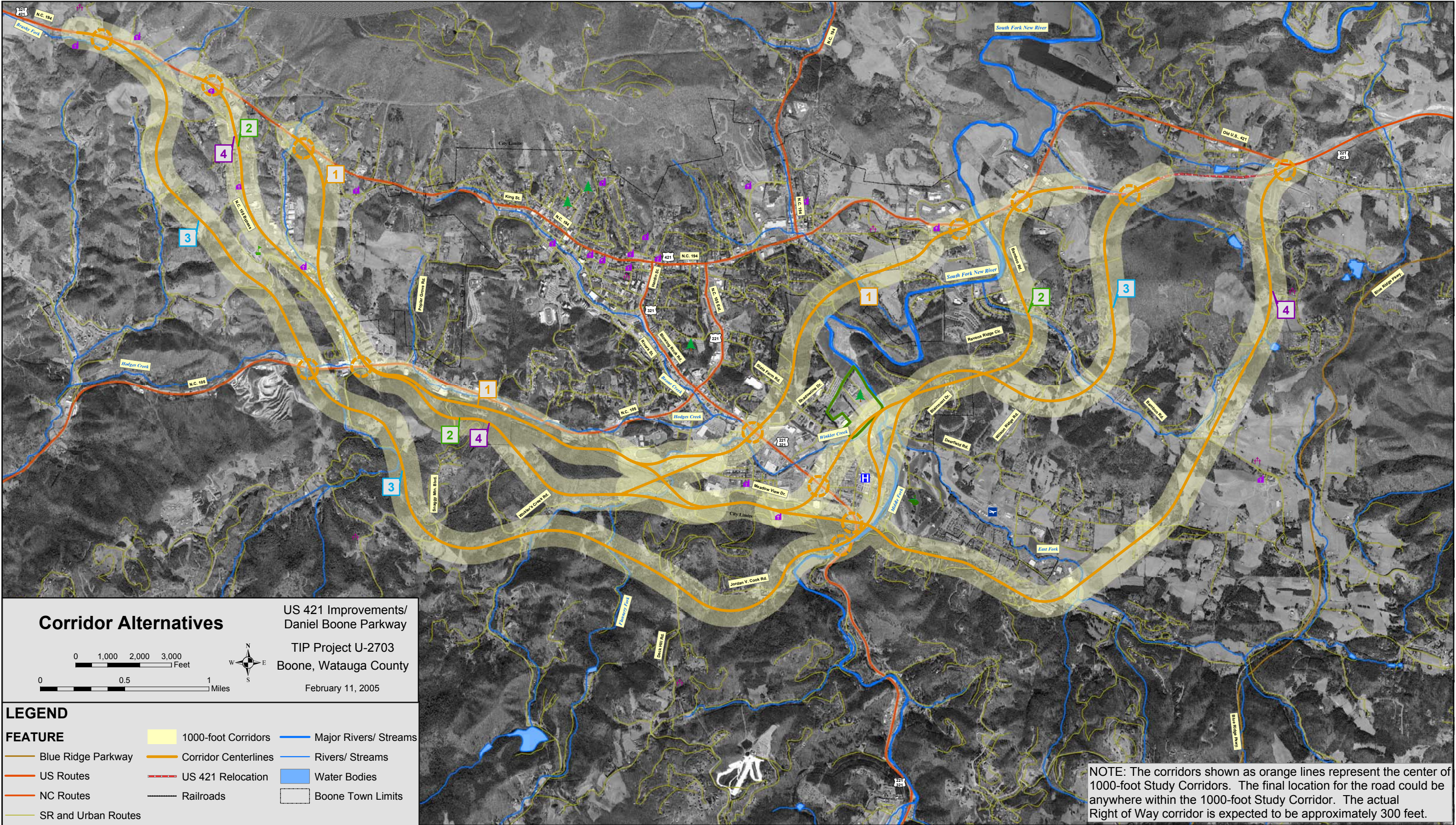


FIGURE 7 c



*Back of Figure*



## **Appendix A**

### **Thoroughfare Plans**

#### List of Items Included in Appendix A:

- Boone 1979 Thoroughfare Plan
- Boone 1991 Thoroughfare Plan
- Watauga County 2002 Thoroughfare Plan



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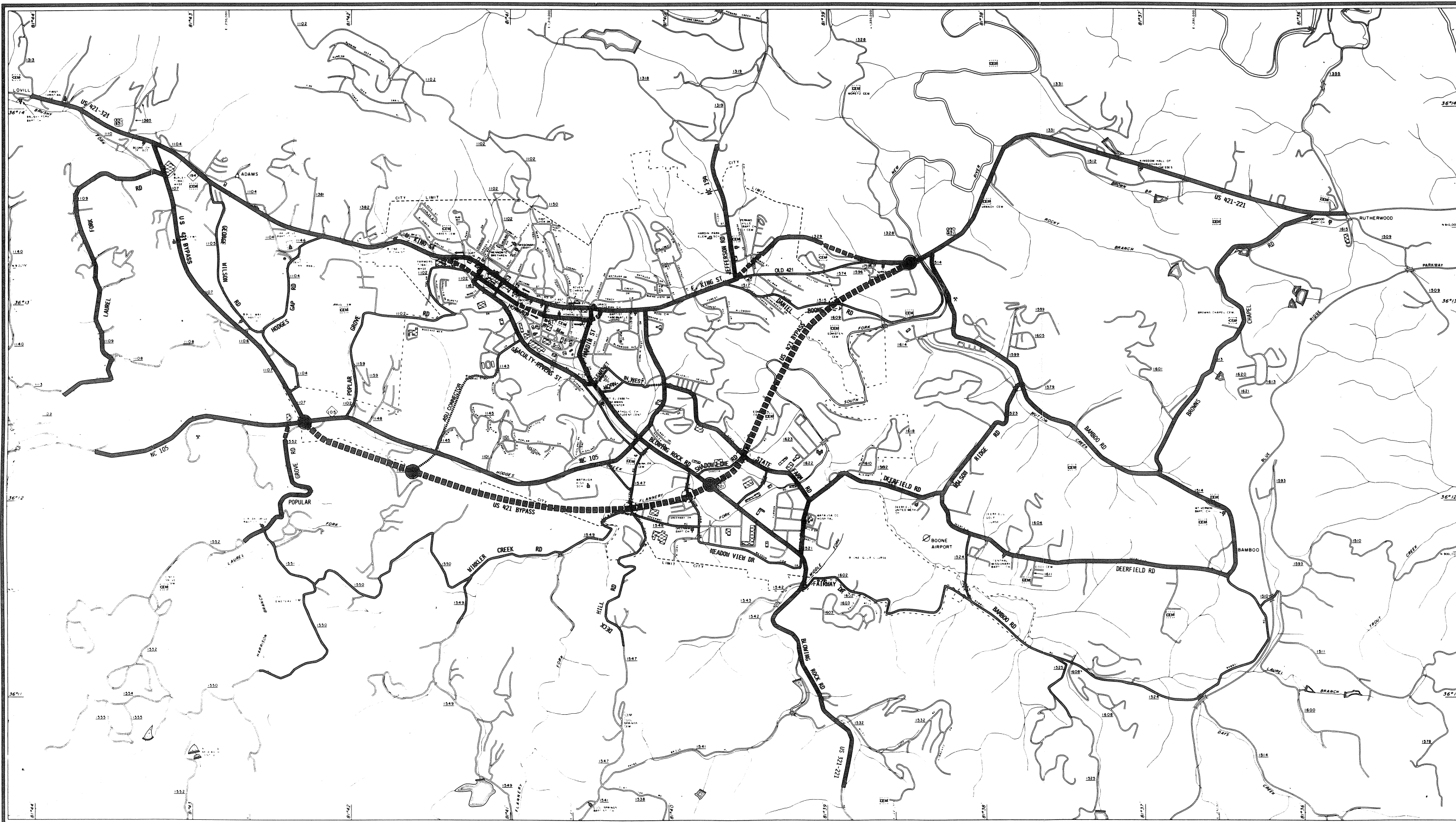






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# **BOONE THOROUGHFARE PLAN** MAY 1, 1991

LEGEND	
	EXISTING    PROPOSED
MAJOR THOROUGHFARES	
FREEWAYS	
OTHER	
MINOR THOROUGHFARES	
INTERCHANGES	
GRADE SEPARATIONS	

ADOPTED BY:  
Town of Boone    5-20-91  
RECOMMENDED FOR APPROVAL BY: *M.R. Red*  
Planning & Environmental Branch    7-15-91  
ADOPTED BY:  
N.C. Department of Transportation    8-2-91  
PUBLIC HEARING DATES: 1-29-91, 5-16-91

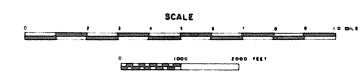
**FIGURE VI-1**



## **BOONE AND VICINITY** WATAUGA COUNTY

## **NORTH CAROLINA**

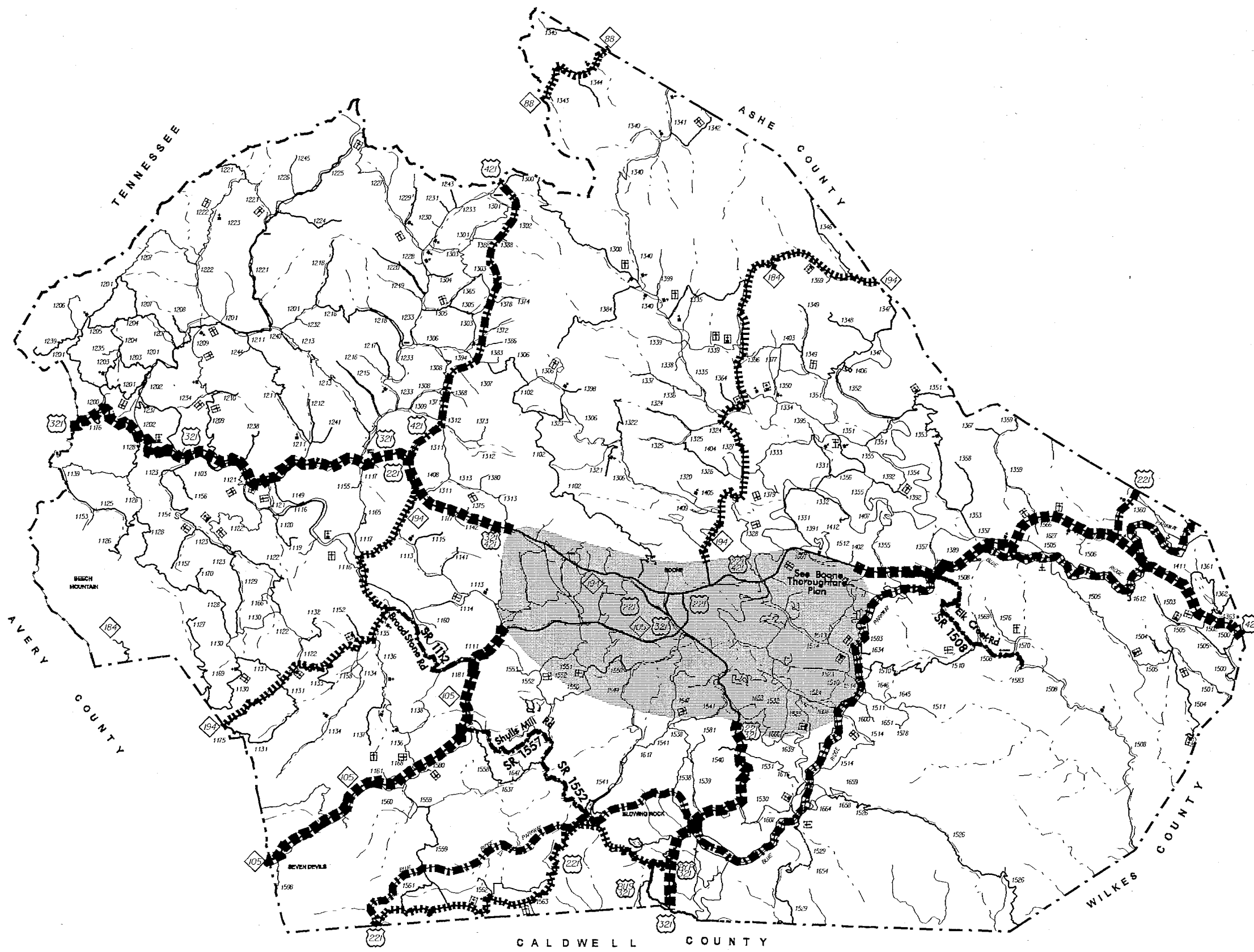
PREPARED BY THE  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS - PLANNING AND RESEARCH BRANCH  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION





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# Legend

	Existing	Proposed
Interstate		
Principal Arterial		
Minor Arterial		
Major Collector		
Minor Collector		
Grade Separation		
Interchanges		
Urban Planning Boundary		

ADOPTED BY:

Watauga County

FEBRUARY 4, 2002

Recommended By:  
Statewide Planning Branch

APRIL 9, 2002

N.C. Department of  
Transportation

MAY 2, 2002

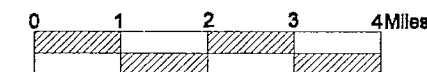


## THOROUGHFARE PLAN

### WATAUGA COUNTY NORTH CAROLINA

PREPARED BY THE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
STATEWIDE PLANNING BRANCH  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION



Sheet Map Date: March 12, 2001



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## **Appendix B**

### **Merger Team Meetings Summaries**

#### **List of Items Included in Appendix B:**

- Kick Off/ Scoping Merger Team Meeting (September 18, 2002)
  - Meeting Notice Memo
  - Agenda/ Handout
  - Meeting Summary
- Concurrence Point 1 (CP1): Purpose and Need Merger Team Meeting (January 22, 2003)
  - Meeting Notice Memo
  - Agenda
  - Meeting Summary
- Notice of Intent (October 24, 2003)
- NCDOT Scoping Meeting (December 2, 2003)
  - Meeting Notice Memo & Scoping Sheets/ Maps
  - Meeting Summary Distribution Memo
  - Agenda/ Project Information/ Summary of Comments Received
- Concurrence Point 2 (CP2): Alternatives to be carried Forward for Detailed Study Merger Team Meeting (March 15, 2005)
  - CP2 Merger Project Team Packet
  - Meeting Summary
  - Additional Information Distribution Memo (May 23, 2006) including the April 6, 2006 Supplement to the CP2 Merger Project Team Packet



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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

September 3, 2002

MEMORANDUM TO: Jean Manuele, U.S. Army Corps of Engineers  
Jake Rigsbee, Federal Highway Administration-NC Division  
Loretta Barren, Federal Highway Administration-NC Division  
Chris Militscher, Office of Environmental Assessment  
Marella Buncick, U.S. Fish and Wildlife Service  
Cynthia Van der Wiele, Division of Water Quality/ Wetlands  
Marla Chambers, NC Wildlife Resources Commission  
Renee Gledhill-Early, State Historic Preservation Office

FROM: Alena R. Cook, P.E., NCDOT Statewide Planning Branch

SUBJECT: Kick Off/ Scoping Meeting for TIP Project U-2703,  
a Pre-TIP Planning Study of Proposed Improvements to the  
US 421 Corridor in the Vicinity of Boone, Watauga County.

This is notice for the Kick Off/ Scoping Meeting for unfunded Transportation Improvement Program (TIP) Project U-2703. This first meeting is scheduled for September 18, 2002, from 3pm to 5pm in the Board Room of the Transportation Building in Raleigh, NC. The purpose of this meeting is to start the merger process for Project U-2703, which will be the first project studied under the new Pre-TIP Planning Process. The agenda for this initial meeting will include the following: the history of the planning conducted to date, an overview of the Pre-TIP Planning Process, and general scoping.

This Pre-TIP Planning Study will examine the need for improvements to the US 421 corridor in the vicinity of Boone in Watauga County. Identification of the need for improvements to US 421 originated from the systems planning process. A proposal to relocate US 421 in the vicinity of Boone has been on the Town of Boone's Thoroughfare Plan since the 1960s. The most recent studies in the area have included an update of the Thoroughfare Plan in 1991 and a systems-level environmental screening that included input from resource agencies in 1998.



In response to continued request from the local community to study US 421 further, NCDOT announced in February of 2002 that the corridor had been selected to be studied through the Pre-TIP Planning Process. This Pre-TIP Planning Study will follow North Carolina's National Environmental Policy Act (NEPA)/ Section 404 of the Clean Water Act Merger Process. The study will cover the first two concurrence points: Concurrence Point 1- Purpose and Need and Concurrence Point 2- Alternatives to be Carried Forward.

The primary difference between the Pre-TIP Planning Process and the traditional merger process is that these first two concurrence points are being addressed before the project is funded in the TIP. NCDOT's Statewide Planning Branch (SWP) and Project Development and Environmental Analysis Branch (PDEA) will work with the merger project team throughout the merger process. SWP will take the lead for NCDOT for the Pre-TIP Planning Process (the first two concurrence points) and PDEA will take the lead for the remainder of the merger process after the project is funded in the TIP.

I look forward to discussing this study with you further on September 18 at the Kick Off/ Scoping Meeting. If you have any questions or would like additional information before then, please contact me by telephone at (919) 733-4705 or by e-mail at [arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us).

Cc: John Spear, Senior Planner, Town of Boone  
Phillip Trew, AICP, High Country RPO  
Carl McCann, P.E., Division Engineer, NCDOT  
Jay Bennett, P.E., Roadway Design, NCDOT  
Eric Midkiff, P.E., PDEA, NCDOT  
Jerry Dudeck, P.E., Statewide Planning, NCDOT

## ***Merger Team Scoping/ Kick Off Meeting September 18, 2002***

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### **AGENDA**

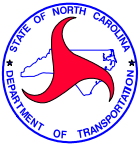
- ✦ *Introductions*
- ✦ *Overview of Pre-TIP Planning Process*
- ✦ *History of Systems-Level Study  
of US 421 in Watauga County*
- ✦ *Proposed Study Area Boundary*
- ✦ *Scoping/ Other Issues*



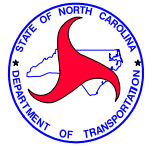
## *Merger Team Scoping/ Kick Off Meeting September 18, 2002*

### **History of Systems-Level Study of US 421 in Watauga County**

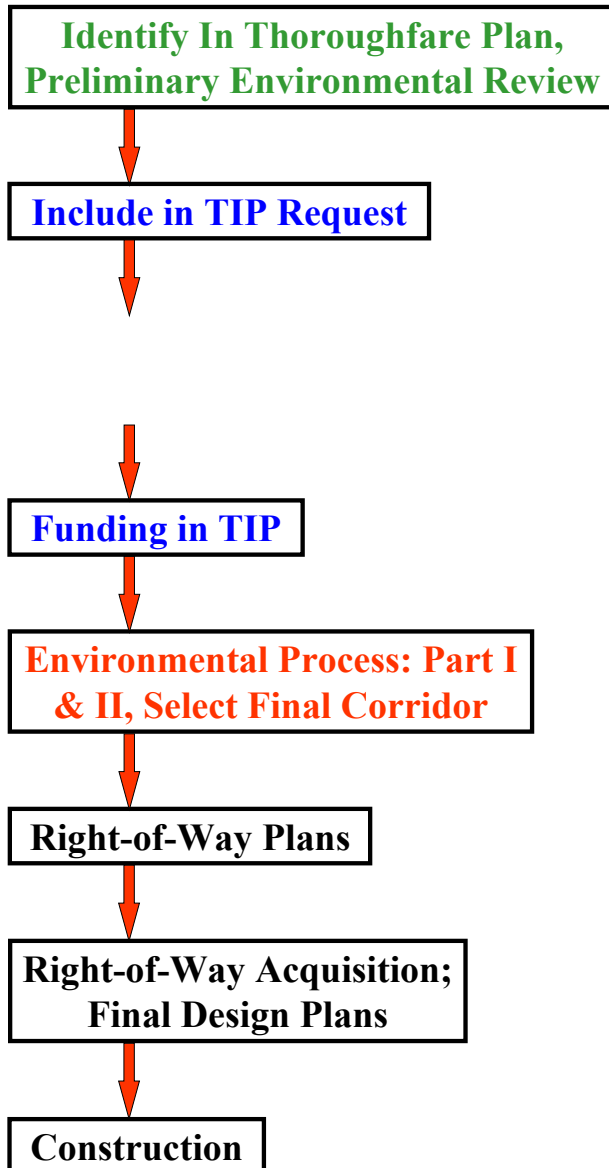
- ✦ *Thoroughfare Plans:  
Boone (1964, 1979, 1991)  
Watauga County (1989, Region D 1993, 2001)*
- ✦ *Improvements to US 421 listed in the 2002-2008 TIP  
as an 'unfunded project' U-2703*
- ✦ *Request by Boone Town Council for NCDOT  
to study U-2703 (1995)*
- ✦ *Systems-Level Environmental Review:  
Draft Report, Public Meetings,  
Coordination with Agencies (1997-98)*
- ✦ *Town Council asks NCDOT to study  
additional alternatives (Nov 1999)*
- ✦ *Local Transportation Task Force develops  
a new alternative (2000)*
- ✦ *Request by Boone Town Council for NCDOT  
to continue the study and to include  
the Task Force alternative (March 2001)*
- ✦ *NCDOT announces U-2703 will be studied through  
the Pre-TIP Process (February 2002)*



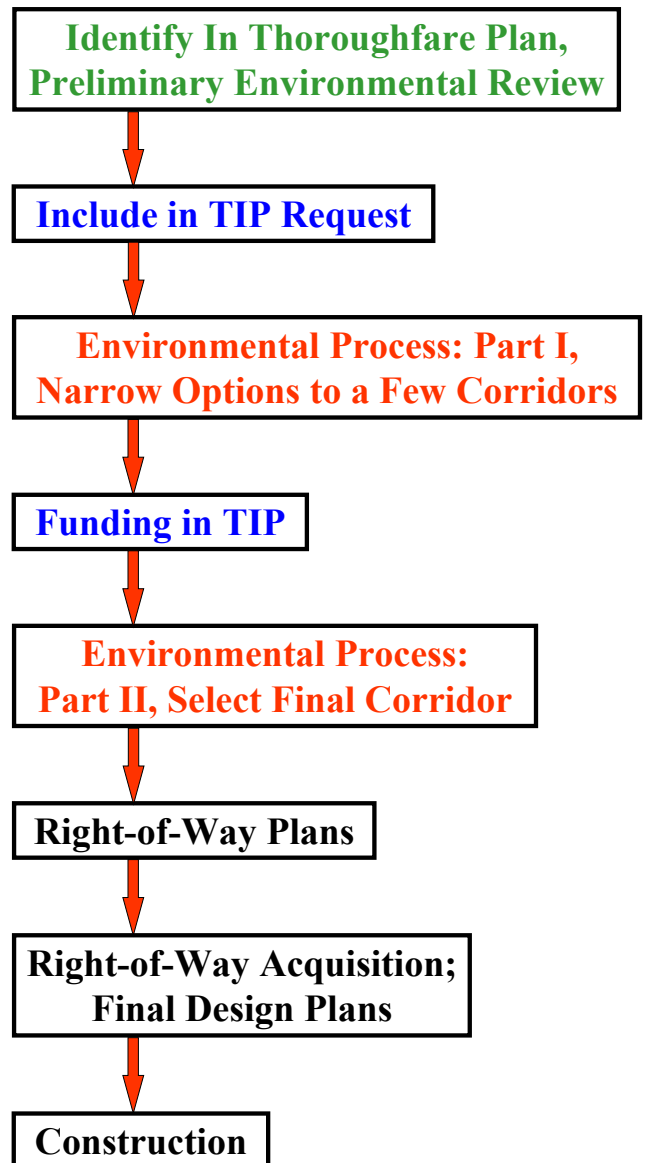
## Development Processes For A New Road



### STANDARD PROCESS



### PRE-TIP PROCESS





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# MERGER TEAM MEETING

## Scoping/ Kick Off Meeting

### Date/ Time

September 18, 2002  
3:00 pm

### Location

Raleigh, NC  
NCDOT Transportation Building,  
Board Room

## PURPOSE

To coordinate with the merger team on the proposed approach for studying TIP Project U-2703 through the Pre-TIP Planning Process.

## ATTENDEES

### Name

Eric Alsmeyer  
Mike Bruff  
Marella Buncick  
Marla Chambers  
Alena R. Cook  
Joseph Cotton  
Jerry Dudeck  
Renee Gledhill-Earley  
Sarah McBride  
Eric Midkiff  
Christopher Militscher  
Glenn Mumford  
Jake Riggsbee  
Dewayne Sykes  
John Thomas  
Cynthia Van Der Wiele  
Scott Walston

### Organization

Corps of Engineers  
NCDOT- Statewide Planning  
US Fish and Wildlife Service  
NC Wildlife Resource Commission  
NCDOT- Statewide Planning  
FHWA  
NCDOT- Statewide Planning  
DCR/ Historic Preservation Office  
DCR/ Historic Preservation Office  
NCDOT- PDEA  
USEPA- Raleigh  
NCDOT- Roadway Design  
FHWA  
NCDOT- Roadway Design  
Corps of Engineers  
Division of Water Quality  
NCDOT- Statewide Planning

## AGENDA

- 1) Introductions
- 2) Overview of Pre-TIP Planning Process
- 3) History of Systems-Level Study of US 421 in Watauga County
- 4) Proposed Study Area Boundary
- 5) Scoping/ Other Issues



## MEETING SUMMARY

- 1) The meeting was started with an explanation of the meeting purpose and review of the agenda. (Refer to 'Agenda', page 1 of the handout). All attendees introduced themselves.
- 2) An overview of the Pre-TIP Planning Process was presented. (Refer to 'Development Processes for a New Road', page 2 of the handout). The process was recently developed through discussions between NCDOT and other stakeholder agencies. The Pre-TIP Planning Process will follow the NEPA/ Section 404 Merger Agreement in the same way that other projects do. The primary difference with the Pre-TIP Planning Process is that Concurrence Points 1 (Purpose and Need) and 2 (Alternatives to Be Carried Forward for Detailed Study) will be covered before the project is funded in the TIP. Statewide Planning Branch will take the lead for NCDOT during the Pre-TIP Planning Process. After the project is funded in the TIP, the Project Development and Environmental Analysis Branch will lead the project for NCDOT through the remainder of the NEPA/ Section 404 Merger Process. The Pre-TIP Planning Process is expected to offer the advantages of earlier coordination with stakeholder agencies and examination of the benefits and impacts of the proposed project prior to the decision of funding in the TIP.
  - It was noted that improvements to US 421 are listed in the 2002-2008 TIP as Project U-2703, but that the project is unfunded. The TIP project description, if a project moves forward, may be revised based on the outcome of this Pre-TIP Study. It was discussed that Pre-TIP Studies differ from Feasibility Studies in that they will go into a greater level of detail. The early coordination through the Pre-TIP Study Process is expected to offer benefits, such as agency decisions not being pushed by project schedules.
- 3) The characteristics of relevant features in the vicinity of Boone, Watauga County were discussed, such as major transportation elements and landmarks. (Refer to 'Geographic Location', page 4 of the handout). Boone is the juncture point of several major regional roads, such as US 421, US 321, US 221, NC 105, and NC 194. Major features of the area include the 'traditional downtown' along US 421 (King Street), commercial and retail development along US 321 and NC 105, Appalachian State University, Watauga High School, Boone Mall, Watauga Medical Center, the South Fork of the New River and the town's greenway. Recent transportation upgrades have been implemented along US 421 from Boone to Winston-Salem through intrastate system projects, including a section on new location just east of Boone.
  - The cross-section of US 421 varies from this new location project westward through Boone and to Tennessee. There is a 4-lane section east of Boone, but through Boone and westward US 421 is primarily a 2-lane facility, with some turn lanes at intersections within the town limits.

The history of systems-level study of US 421 in Watauga County was also presented. (Refer to page 3 of the handout). Improvements to US 421 have been studied as part of the Boone and Watauga County Thoroughfare Plans. A systems level

environmental review of proposals to improve US 421 was conducted in 1998, in response to a request from the Boone Town Council. In 2000, a local transportation task force studied the proposals further and developed an additional alternative, as well as a vision for the improvement to be a scenic parkway, named the 'Daniel Boone Parkway'. In response to a request from the Boone Town Council to study the project further, NCDOT announced in February of 2002 that proposed improvements to US 421 in the vicinity of Boone (TIP Project U-2703) would be studied through the Pre-TIP Planning Process.

- The Boone Thoroughfare Plan includes a proposal to reroute US 421 to new location. The Watauga County Thoroughfare Plan may be amended to show an improvement, depending on the outcome of this Pre-TIP Study.
  - NCDOT made copies of the 1998 environmental review, as well as the agencies' comments, available to the Merger Team members. Most of the alternatives developed previously are expected to be feasible, with the following exceptions. An alternative to the north would fail to make the connections to US 321 south and NC 105 west. The furthest southern alternative is also not expected to meet the purpose and need for improvements due to low traffic use because of its greater length than other alternatives.
- 4) The proposed Study Area Boundary was shown on aerial photography and discussed. (Refer to 'US 421 Corridor Pre-TIP Study', page 5 of the handout). The proposed Study Area includes the area covered by all previously studied alternatives, including options to the north and south of US 421. The Study Area Boundary covers an area large enough to include all reasonable locations for alternatives due to distance or in some cases, geographic limitations due to topography. The Merger Team will seek to reach consensus on the Study Area Boundary at the next merger team meeting, based on a map of the boundary shown with area transportation features, major water features, and topography.
- It was discussed that alternatives to the north do not make the connections to the southbound routes. NCDOT noted that based on traffic analyses done previously, the volume of traffic making connections from US 421 to US 321 and NC 105 to the south and west of Boone is just as significant as the through traffic on US 421. It is expected that alternatives to the north of Boone will not meet the project purpose and need because they will not serve the traffic needs to the south of Boone. However, all alternatives will be documented in the Pre-TIP Study report with the reason for elimination of those that do not meet the purpose and need for improvements.
- 5) The following general scoping topics and other issues were discussed.
- The Merger Team will also receive the Quarterly Progress Reports that are being distributed to various stakeholders. One of the local groups interested in the process is Watauga Citizens for Better Transportation.
  - In developing alternatives for improvements to US 421, truck use and access control will be considered. Possible wider right of way purchase may be considered for viewshed protection.

- The relation of proposed alternatives to the relocation of US 421 to the east of Boone currently underway was discussed. Most of the alternatives tie in to the west or at the mid-point of the new section, utilizing that relocation of US 421.
- The proposed name for the facility, the Daniel Boone Parkway, evolved from the Local Transportation Task Force's work in 2000. It was discussed that the definition of a parkway may need to be examined, but there is nothing restricting the use of 'parkway' in the name of a roadway. The preliminary functional designs completed by NCDOT- Roadway Design Unit were based on a facility having full control of access.
- A proposed Public Involvement Process will be discussed at the next Merger Team Meeting, including particular efforts to involve special interest groups. Representatives from the Town of Boone and the High Country RPO have been invited to provide local input at the Merger Team meetings.
- Minutes from the Merger Team Meetings, as well as a list of attendees, will be distributed in the next meeting's information packet and will be included in the final Pre-TIP Study Report.
- The Merger Team may hold a field meeting in Boone, possibly the same day as the public meeting on all the alternatives developed.





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

January 7, 2003

MEMORANDUM TO: Eric Alsmeyer, US Army Corps of Engineers  
Jake Riggsbee, Federal Highway Administration-NC Division  
Loretta Barren, Federal Highway Administration-NC Division  
Christopher Militscher, US EPA-Raleigh  
Marella Buncick, US Fish and Wildlife Service  
Cynthia Van der Wiele, NCDENR-Division of Water Quality  
Marla Chambers, NCDENR-Wildlife Resources Commission  
Renee Gledhill-Early, NCDCCR-State Historic Preservation Office

FROM: Alena R. Cook, P.E., NCDOT Statewide Planning Branch

SUBJECT: Merger Team Meeting for TIP Project U-2703,  
a Pre-TIP Planning Study of Proposed Improvements to the  
US 421 Corridor in the Vicinity of Boone, Watauga County

The next Merger Team Meeting for the Pre-TIP Study of unfunded Transportation Improvement Program (TIP) Project U-2703 is scheduled for January 22, 2003. This meeting will be held at 10:30 am in the Board Room of the Transportation Building in Raleigh. The primary purpose of this meeting is discuss the Purpose and Need for Project U-2703.

Attached is a draft of the Pre-TIP Study Report, dated December 16, 2002. It contains an overview of the Pre-TIP process, background information on transportation planning in Boone, a proposed public involvement plan, and the draft Purpose and Need. Please review the Purpose and Need, which starts on page 7, and the Study Area Boundary (Figure 3), as we will be seeking concurrence on these items. We will also discuss and modify, as necessary, the proposed public involvement plan, which starts on page 5.

Also attached is a summary of our initial Scoping/ Kick Off Merger Team meeting, held on September 18, 2002. Please let me know of any additions or corrections prior to or during the January 22, 2003 meeting. If you have any questions or would like additional information before then, please contact me by telephone at (919) 733-4705 or by e-mail at [arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us).

Attachments

Cc: Phillip Trew, AICP, High Country RPO  
John Spear, Town of Boone  
Carl McCann, PE, Division Engineer, NCDOT  
Glenn W. Mumford, PE, Roadway Design, NCDOT  
Dewayne L. Sykes, PE, Roadway Design, NCDOT  
Roy Shelton, PDEA, NCDOT  
Eric Midkiff, PE, PDEA, NCDOT  
Mike Bruff, PE, Statewide Planning, NCDOT  
Jerry Dudeck, PE, Statewide Planning, NCDOT  
Beverly S. Williams, Statewide Planning, NCDOT  
Scott Walston, PE, Statewide Planning, NCDOT

## ***Merger Team Purpose & Need Meeting January 22, 2003***

---

### ***AGENDA***

- ✦ *Introductions*
- ✦ *Project Overview and Summary of Scoping/ Kick Off Meeting*
- ✦ *Purpose and Need*
- ✦ *Study Area Boundary*
- ✦ *Local/ Public Involvement Plan*
- ✦ *Other Issues*

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**MERGER TEAM**  
**Purpose and Need Meeting**  
**Concurrence Point 1**

*Date/ Time*

January 22, 2003  
10:30 am

*Location*

Raleigh, NC  
NCDOT Transportation Building,  
Board Room

**PURPOSE**

To reach concurrence with the merger team on the Purpose and Need, Study Area Boundary, and Local/ Public Involvement Plan for TIP Project U-2703.

**ATTENDEES**

**Name**

**Organization**

Beth Haims Barnes	NC Division of Water Quality
Loretta Barren	FHWA
Marella Buncick	US Fish and Wildlife Service, via video conference
Marla Chambers	NC Wildlife Resource Commission, via video conference
Alena R. Cook	NCDOT/ Statewide Planning (SWP)
Jerry Dudeck	NCDOT/ SWP
Renee Gledhill-Earley	DCR/ State Historic Preservation Office (SHPO)
John Hennessy	NC Division of Water Quality
Tony Houser	NCDOT/ Roadway Design
Sarah McBride	DCR/ SHPO
Sarah Medley	NCDOT/ SWP
Eric Midkiff	NCDOT/ PDEA
Christopher Militscher	USEPA- Raleigh
Glenn Mumford	NCDOT/ Roadway Design
Jake Riggsbee	FHWA
John Spear	Town of Boone
Dan Thomas	NCDOT/ SWP
John Thomas	US Corps of Engineers
Beverly Williams	NCDOT/ SWP
Marcus Wilner	FHWA

**AGENDA**

- 1) Introductions
- 2) Project Overview and Summary of Scoping/ Kick Off Meeting
- 3) Purpose and Need
- 4) Study Area Boundary
- 5) Local/ Public Involvement Plan
- 6) Other Issues

## **MEETING SUMMARY**

### **1) Meeting Purpose & Introductions**

The meeting was started with an explanation of the meeting purpose and an overview of the agenda. All attendees introduced themselves. The packet for the meeting included a cover letter dated January 7, 2002, a draft of the Pre-TIP Report dated December 16, 2002, and a summary of the September 18, 2002 merger team meeting.

### **2) Project Overview and Summary of Scoping/ Kick Off Meeting**

An overview was given of unfunded TIP Project U-2703 and the Pre-TIP Study Process. A summary was given of the first merger team meeting, which was the Scoping/ Kick Off Meeting held on September 18, 2002. At that meeting the merger team discussed the Pre-TIP Study process, the history of transportation planning in Boone and Watauga County, and the proposed study area boundary. Those in attendance indicated that they had no corrections to make to the September 18, 2002 merger team meeting summary.

- The question was raised whether the Pre-TIP process should include Concurrence Point 2A: Bridging Decisions and Alignment Review or stop at Concurrence Point 2: Detailed Study Alternatives Carried Forward. The challenge with stopping at Concurrence Point 2 will be in developing accurate cost estimates without bridging information. However, certain GIS tools may be used to develop more accurate estimates. The use of these tools will be examined further later in the process.
- A question was raised about what would trigger the need to revisit concurrence points, particularly given that there may be some time delay between the conclusion of the Pre-TIP Process and the rest of the NEPA/ 404 Merger Process being resumed. The merger team discussed that the same criteria would be used to determine whether to revisit concurrence points reached under the Pre-TIP process as through the regular NEPA/ 404 Merger Process. Concurrence Points may be revisited only when there is significant new information that would impact the decision made.

### **3) Purpose and Need**

The Purpose and Need for improvements to the US 421 corridor in the vicinity of Boone, Watauga County was discussed.

#### **Problems/ Need**

The need for improvements to the US 421 corridor in the vicinity of Boone has two components, mobility and safety. The mobility problems were highlighted by explaining the capacity deficiency analysis (refer to Figure 4-Projected Capacity Deficiencies in the draft Pre-TIP Report). The comparison of 2001 traffic counts to the capacity for Level of Service (LOS) D, indicates that US 421 and the other major facilities in the vicinity of Boone are currently near or exceeding their capacity. Future traffic projections for 2020 indicate that US 421 and the other major facilities are expected to be over capacity by a significant amount, all experiencing a LOS F. By 2020 US 321 (between River Street and NC 105) and US 221 (between US 421 and NC 105) are both expected to be over capacity by 20-75%. US 421 (west of NC 194), US 321/ 221 (south of NC 105), NC 105,

and NC 194 are all expected to be over capacity by over 75% by 2020. For example, US 421 just west of NC 194 has a capacity of 17,600 vehicles per day (vpd) compared to a current traffic volume of 22,000 vpd, indicating that the facility is currently over capacity by 25%. The project volume by 2020 is 32,800 vpd, indicating the facility will be over capacity by 86%.

- It was explained that the portion of US 321 between Rivers Street and US 421 has recently been widened to 3 lanes, and no longer experiences a capacity deficiency. It was noted that the traffic counts and projections for the portion of US 321 north of Rivers Street is lower than the section south of Rivers Street. The reason is that a larger portion of the Appalachian State University traffic that uses River Street to access US 321 travels south on US 321. Most of the traffic that wants to access US 421 does not use River Street to head north on US 321 to reach US 421, but instead accesses US 421 directly via Depot Street or College Street. Therefore, the traffic on US 321 is lower north of Rivers Street than south of it.
- The question was raised whether the traffic counts and projections included a seasonal component. All traffic volumes represent average daily travel. In the case of Boone, there are 3 seasons that experience heavy tourism so some portion of this increased travel is represented in the numbers. However, the counts are adjusted to represent an average day in the year, not during a peak tourism season.

This capacity deficiency analysis shows which facilities are experiencing congestion. To examine why the congestion exists and how to reduce it, additional information is given to explain what type of traffic is causing the problems for the existing facilities (refer to Figure 5- Travel Desire Patterns in the draft Pre-TIP Report). The current and 2020 projected Major Through Traffic patterns show that the amount of traffic traveling through the area on US 421 is in the same range as the volume traveling between US 421/ 321 west and US 321/ 221 south. Significant volumes of through traffic also exist between US 421 east and NC 105 west, between US 321/ 221 south and NC 105 west, and between NC 105 west and US 421/ 321 west. This analysis of through traffic patterns indicates that the travel needs between US 421, US 321/ 221 south, NC 105 west are as important as the through traffic needs on US 421. In addition to the need to improve the mobility for through travel, there are significant local travel needs in the area. This is evidenced by the fact that approximately 34- 42% of the traffic on the major facilities is through traffic and the remainder is local travel. Major destinations for local travel include Appalachian State University off of US 421 and US 321, the downtown area along US 421 (King Street), and the commercial development along US 321/ 221 south and NC 105.

To summarize the mobility problems, US 421 and the other major facilities are experiencing congestion which is expected to worsen in the future. This congestion is, in part, due to the volume of travel between US 421, US 321/ 221 south, and NC 105 west. An additional component to the congestion is the mixed use of US 421 by local and through traffic.

Another transportation need for US 421 and the other major facilities is safety. The mixed use of US 421 (King Street) by local and through traffic is a safety concern

because ideally transportation facilities are designed to serve different purposes, either land access, local travel, or regional travel. In the case of US 421 (King Street), high-speed through traffic, including truck traffic, mixes with local traffic which is characterized by slower speeds and more moves to park, stop, or enter and exit the facility. This concern is heightened by the fact that US 421 east of Boone is being upgraded to an expressway- type of facility, thereby setting driver expectation of what the nature of the facility will be. This through traffic must adjust its driving when it enters downtown Boone and is mixed with local traffic.

The need for safety improvements is evidenced by the accident rates on the facilities in the area. For example, there were 566 crashes on US 421 within the study area between 1999 and 2002, corresponding to a rate of 700 accidents per 100 million vehicle miles traveled. A comparison to the statewide average of 211 on other US routes statewide indicates that US 421 is currently experiencing an accident rate much higher than average. The need for safety improvements is, in part, due to the level of congestion on the facilities and the mixed use of US 421 by local and through travel.

### Purpose

Each of these problems discussed, lead to the purposes any improvements should serve, as described in the draft Concurrence Point 1 form.

*Improvements to US 421 in the vicinity of Boone should serve the following purpose:*

- *Reduce the mixed use of US 421 (King Street) through downtown Boone by local and through traffic*
- *Improve access to US 321/221 south and NC 105 west*
- *Reduce traffic congestion along US 421 and the other major facilities*
- *Improve safety along US 421*

It was discussed that comments on the draft Purpose and Need have been received from the Town of Boone, Watauga County, Appalachian State University, and the Boone Area Chamber of Commerce. The changes that will be made to the draft Purpose and Need, dated December 16, 2002, in response to these comments were discussed (refer to the final version of the Purpose and Need, dated January 22, 2003). Further discussion among the merger team included the following issues:

- A question was raised about what type of access was being referred to in the 2<sup>nd</sup> bullet of the project purpose. The term ‘access’ was actually describing the need for system linkage between the major facilities, not driveway or land access. The 2<sup>nd</sup> bullet was reworded to reflect this terminology.
- The needs addressed in the 1<sup>st</sup> bullet of the project purpose would be more fully explained if the impact on pedestrian safety by mixed traffic use of US 421 is examined. A qualitative description of the implications to pedestrian safety will be added to the Purpose and Need.
- The town’s plans for crosswalks and greenways were discussed.
- It was questioned whether a potential new facility to meet the needs for improvements to US 421 would be based on an assumed land use, but then driveway permits would be added later. It was discussed that the committee that approves



driveway permits would not allow them on this type of facility, given that it would be fully- access controlled and on the NHS and intrastate systems.

- The town's Comprehensive Plan, a policy document, and zoning regulations were discussed. The need to iterate between transportation planning and land use planning, in order to more fully integrate them, was discussed.
- The question was raised whether the project purpose is to address through or local travel needs. The intention is to address primarily the through travel needs, thereby improving local travel as well. For example, if through traffic is removed from certain existing facilities, the congestion on these existing facilities will improve, thereby helping the local traffic that will still use the existing facilities.
- It was discussed whether the first two bullets were too limiting of the alternatives to be studied. It was mentioned that rerouting trucks through signage would meet the intention of the 1<sup>st</sup> bullet and improving existing facilities could meet the purpose of the 2<sup>nd</sup> bullet. Therefore, these two points were left in the Purpose and Need.

After this discussion of the Purpose and Need by the merger team, the purpose section of the Concurrence Point 1 form was revised as follows:

*Improvements to US 421 in the vicinity of Boone should serve the following purpose:*

- *Reduce the mixed use of US 421 (King Street) through downtown Boone by local and through traffic*
- ***Improve system linkage between US 421 and the other major facilities***
- ***Improve traffic flow along US 421 and the other major facilities***
- *Improve safety along US 421*

The meeting was concluded after the merger team agreed to sign the revised Concurrence Point 1 form at a later date, subsequent to further coordination with the merger team members that were participating in the meeting via video conference. There were no further comments on the remaining agenda items: the Study Area Boundary (which was reviewed at the September 18, 2002 Scoping/ Kick Off Meeting) and the Local/ Public Involvement Plan.

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

October 24, 2003

Mr. John F. Sullivan, III  
Division Administrator  
Federal Highway Administration  
310 New Bern Avenue  
Suite 410  
Raleigh 27601-1418

Subject: Notice of Intent to prepare an Environmental Impact Statement for the Improvement of  
US 421 in Watauga County to a Multi-lane Facility; TIP No. U-2703

Dear Mr. Sullivan:

Attached is the "Notice of Intent" for the subject project. Please forward this notice to the appropriate officials for publication in the Federal Register.

Thank you for your assistance. If additional information is required, please contact Alena R. Cook, P.E., at (919) 733-4705.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Bruff".

Mike Bruff, P.E.  
Manager, Statewide Planning Branch  
North Carolina Department of Transportation

MB/arc

Attachment

Cc: Jerry Dudeck, P.E., Statewide Planning Branch

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[4910-22]

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

ENVIRONMENTAL IMPACT STATEMENT: TOWN BOONE, WATAUGA  
COUNTY, NORTH CAROLINA

AGENCY: Federal Highway Administration (FHWA), DOT

ACTION: Notice of Intent

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project within Watauga County, North Carolina.

FOR FURTHER INFORMATION CONTACT: Ms. Emily O. Lawton, Operations Engineer, Federal Highway Administration, 310 New Bern Avenue, Suite 410, Raleigh, North Carolina 27601, Telephone (919) 856-4350.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT), will prepare an environmental impact statement (EIS) for the proposed improvement of US 421 to multi-lanes from NC 105 Bypass to east of SR 1514 (Bamboo Road) in Watauga County (approximately 5.3 miles). The proposed action is to upgrade this section of US 421 to a high speed, multi-lane facility. US 421, the primary east-west corridor in the north-western part of the state, connects the North Carolina coastal region (Wilmington) to the western part of the state and, ultimately, to Tennessee. This proposed project is a portion of the projects proposed for US 421 in the NCDOT's 2004-2010 Transportation Improvement Program (TIP).

Alternatives under consideration include: (1) "no-build", (2) widening the existing facility, and (3) multiple bypass alternatives for a four-lane divided facility control of access.

Letters describing the proposed action and soliciting comments have been sent to appropriate Federal, State and local agencies. A Citizens Informational Workshop and meetings with local officials and neighborhood groups will be held in the study area.

Public hearings will also be held. Information on the time and place of the public hearings will be provided in the local news media and project newsletters. The draft EIS will be available for public and agency review and comment at the time of the hearing. No formal scoping meeting is planned at this time.

To ensure the full range of issues related to the proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments and questions concerning the proposed action should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Research Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program).

Issued on:

---

Emily O. Lawton  
Operations Engineer  
Raleigh, North Carolina

-----  
DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Town **Boone**, Watauga County, NC

AGENCY: Federal Highway Administration (FHWA). DOT.

ACTION: Notice of intent.

-----

SUMMARY: The FHWA is issuing this notice to advise the public that an Environmental Impact Statement will be prepared for a proposed highway project within Watauga County, North Carolina.

FOR FURTHER INFORMATION CONTACT: Ms. Emily O. Lawton, Operations Engineer, Federal Highway Administration, 310 New Bern Avenue, Suite 410, Raleigh, North Carolina 27601, Telephone (919) 856-4350.

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(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Research Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program).

Emily O. Lawton,

Operations Engineer, Raleigh, North Carolina.

[FR Doc. 03-30181 Filed 12-3-03; 8:45 am]

BILLING CODE 4910-22-M

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

October 28, 2003

MEMORANDUM TO: Distribution

FROM: Mike Bruff, P.E., Manager *Michael Bruff*  
Statewide Planning Branch

SUBJECT: Review of Scoping Sheets for U-2703, Improvements to  
US 421 in the Vicinity of Boone, Watauga County

Attached for your review and comments are the scoping sheets for the subject project (see attached maps for project location). The purpose of these sheets and the related review procedure is to have an early "meeting of the minds" as to the scope of work that should be performed and thereby enable us to better implement the project. This project is being studied through the Pre-TIP process, meaning that the first two concurrence points of the merger process are being completed prior to project funding.

A scoping meeting for this project is scheduled for 1pm on December 2, 2003 in the Statewide Planning Branch Conference Room (Room 605). You may provide us with your comments at the meeting or mail them to us prior to that date.

Thank you for your assistance in this part of our planning process. If there are any questions about the meeting or the scoping sheets, please call Alena R. Cook, P.E. at 733-4705. Please include the TIP Project Number in all correspondence and comments.

MB/arc

Attachment



Distribution: Samuel L. Erby, Member, Board of Transportation  
Jake D. Riggsbee, Federal Highway Administration  
Calvin W. Leggett, PE, Program Development Branch Manager  
Gregory J. Thorpe, PhD, PDEA Branch Manager  
Deputy Highway Administrator – Preconstruction  
Troy A. Peoples, PE, State Traffic Engineer  
John Williamson, Right of Way Branch Manager  
Aydren Flowers, Right of Way Branch State Utilities Agent  
Tom Norman, Bicycle and Pedestrian Division Director  
Deborah M. Barbour, PE, Highway Design Branch State Design Engineer  
Jay A. Bennett, PE, State Roadway Design Engineer  
Greg Perfetti, PE, State Bridge Design Engineer  
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Al Avant, Program Development Branch Assistant Branch Manager  
Omar S. Sultan, Program Development Branch  
Phillip S. Harris, III, PE, Office of Natural Environment Manager  
Carl Goode, Office of Human Environment Manager  
J. Kevin Lacy, PE, Traffic Safety Systems Engineer  
David Hinnant, Right of Way Branch State Railroad Agent  
James B. Harris, PE, NCDOT Rail Division Engineering Manager  
Doug Lane, Design Services Unit

cc: Rocky Nelson, Manager, Watuaga County  
Greg Young, Manager, Town of Boone  
Phillip Trew, AICP, High Country RPO  
Eric Midkiff, PE, PDEA  
Jerry Dudeck, PE, Statewide Planning Branch  
Beverly S. Williams, Statewide Planning Branch

## SCOPING SHEET

TIP No. U-2703

Date: October 28, 2003

Revision Date:

Project Development Stage

- ☐ Programming  
☒ Planning  
☐ Design

DIVISION: 11 COUNTY: Watauga

ROUTE: Boone, US 421 (King Street) from NC 105 Bypass to east of SR 1514 (Bamboo Rd)

FUNCTIONAL CLASSIFICATION: Principal Arterial

LENGTH: 5.3 mi

PURPOSE OF PROJECT: The purpose of this project is to relieve congestion and improve safety on US 421 (King Street) in the vicinity of Boone, as well as to improve system linkage to US 321, US 221, and NC 105.

DESCRIPTION OF PROJECT (INCLUDING SPECIFIC LIMITS) AND MAJOR ELEMENTS OF WORK: The proposed project consists of improvement of the US 421 Corridor in Watauga County to a multilane facility, possibly on new location from NC 105 Bypass to east of SR 1514 (Bamboo Road).

TYPE OF ENVIRONMENTAL  
DOCUMENT TO BE PREPARED: EIS

ENVIRONMENTAL STUDY SCHEDULE: This project is currently unfunded, therefore no project schedule has been established. It is currently being studied through the Pre-TIP process, which will involve completing concurrence points 1 and 2 of the merger process prior to project funding.

WILL THERE BE SPECIAL FUNDING PARTICIPATION BY MUNICIPALITY,  
DEVELOPERS, OR OTHERS? Yes ☐ No ☒

IF YES, BY WHOM AND AMOUNT: (\$), or (%)

HOW AND WHEN WILL THIS BE PAID?

## PROJECT SCOPING SHEET

TYPE OF ACCESS CONTROL: Full ☒ Partial ☐ None ☐

NUMBER OF: Interchanges 3-4, Grade Separations 0, Stream Crossings 2-3

### TYPICAL SECTION OF ROADWAY:

Existing: US 421 (King Street): From NC 105 Bypass to NC 105 Extension/ US 221 the existing road is two lanes, two-way. The speed varies from 20 to 45 mph and there is on street parking which varies from one side to both sides as well as from parallel to angled spaces. From NC 105 Extension/ US 221 to the relocation of US 421 east of SR 1514 (Bamboo Road) the existing road cross section varies from two to four and five lanes and the speed limit varies from 35 to 45 mph.

Proposed: The typical section for alternatives on new location is 4-lane, 76-foot section with median and paved shoulders. The typical section for the alternative to widen the existing roadway is a five-lane, 64-foot face-to-face, curb and gutter section.

TRAFFIC (ADT): Current (2001): 11,100 – 27,000 vpd  
Design Year (2020): 17,500 - 36,200 vpd  
TTST % DUAL % DHV %

DESIGN STANDARDS APPLICABLE: AASHTO ☒ 3R ☐

DESIGN SPEED: 60 mph

### CURRENT COST ESTIMATE in millions:

Note: A range is given for the estimates of all alternatives.  
The cost estimates do not include improvements to NC 105 Bypass.

Construction Cost (including engineering and contingencies) .....	\$ 12.4 – 197.3
Right of Way Cost (including relocation, utilities and acquisition) .....	\$ 40.0 – 125.0
Force Account Items .....	\$
Preliminary Engineering .....	\$
Total Cost .....	\$ 94.9 – 241.3

TIP COST ESTIMATE in millions:

Construction. ....	\$	93.8
Right of Way. ....	\$	46.0
TOTAL TIP COST ESTIMATE .....	\$	139.8

LIST ANY SPECIAL FEATURES, SUCH AS RAILROAD INVOLVEMENT, WHICH COULD AFFECT COST OR SCHEDULE OF PROJECT:

Local representatives have expressed a desire for consideration to be given to the type of amenities that can be included in this project to give it a context sensitive design. Specifically, they are requesting that it be evaluated whether this project can have a "parkway" type of design, including consideration of viewsheds and landscaping.

Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_

THE ABOVE SCOPING INFORMATION HAS BEEN REVIEWED AND APPROVED BY:

	Init.	Date		Init.	Date
Board of Transp. Member	_____	_____	Highway Design	_____	_____
FHWA	_____	_____	Roadway	_____	_____
County	_____	_____	Structure Design	_____	_____
Municipality	_____	_____	Design Services	_____	_____
Local Planning Org.	_____	_____	Geotechnical	_____	_____
Statewide Planning	_____	_____	Hydraulic	_____	_____
Program Development	_____	_____	Loc. & Surveys	_____	_____
PDEA	_____	_____	Photogrammetry	_____	_____
Dep. Admin.- Preconstruct.	_____	_____	Chief Engineer- Operations	_____	_____
Traffic Engineering	_____	_____	Division Engineer	_____	_____
Right of Way	_____	_____	Construction Branch	_____	_____
Right of Way Utilities	_____	_____	Roadside Environmental	_____	_____
Bicycle & Ped. Div.	_____	_____	Bridge Maintenance	_____	_____

Scoping Sheet for local officials will be sent to Division Engineer for handling.

[illegible]

**NOTE: Also attached Figure 1: Geographic Location of Boone, Watauga County, and Figure 2: Traffic Origins and Destinations**



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

January 29, 2004

MEMORANDUM TO: Distribution

FROM: Mike Bruff, P.E., Manager *MSB*  
Statewide Planning Branch

SUBJECT: Scoping Meeting Summary for U-2703, Improvements to  
US 421 in the Vicinity of Boone, Watauga County

A scoping meeting for the subject project was held on December 2, 2003. Attached for your review is the scoping meeting handout and summary of comments received.

The purpose of this scoping effort is to get early input as to the scope of work that should be performed, thereby enabling us to better implement the project. If you have any additional comments at this time, please let us know as soon as possible by contacting Alena R. Cook, P.E. at 733-4705 or [arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us). Thank you for your assistance in this part of our planning process.

MB/arc

Attachment



Distribution: Samuel L. Erby, Member, Board of Transportation  
Jake D. Riggsbee, Federal Highway Administration  
Calvin W. Leggett, PE, Program Development Branch Manager  
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J. Kevin Lacy, PE, Traffic Safety Systems Engineer  
David Hinnant, Right of Way Branch State Railroad Agent  
James B. Harris, PE, NCDOT Rail Division Engineering Manager  
Doug Lane, Design Services Unit

cc: Rocky Nelson, Manager, Watauga County  
Greg Young, Manager, Town of Boone  
Phillip Trew, AICP, High Country RPO  
Eric Midkiff, PE, PDEA  
Jerry Dudeck, PE, Statewide Planning Branch  
Beverly S. Williams, Statewide Planning Branch

## **TIP Project # U-2703**

### **Scoping Meeting Agenda, Project Information, and Summary of Comments Received Tuesday - December 2, 2003; 1:00 p.m.**

---

**Alena R. Cook, P.E.**

Statewide Planning Branch

(919) 733-4705

[arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us)

#### **I. Pre-TIP Process and Merger 01**

It is anticipated that this project will go through the Merger. The Merger Process would involve obtaining agreement on the following concurrence points:

1. Purpose and Need
2. Alternatives Carried Forward
  - 2A. Bridging
3. Selected Corridor (Least Environmentally Damaging Practicable Alternative – LEDPA)
4. Impact Minimization
  - a) Alignment
  - b) 30% Hydraulic Design
  - c) Permit Drawings

The Pre-TIP process means that the Statewide Planning Branch will lead the Merger Team through the first two concurrence points before the project is funded. Once the project receives funding, the Project Development and Environmental Analysis Branch will lead the Merger Team through the remainder of the concurrence points.

#### **II. History of Systems Level Study of US 421 in Watauga County**

- ◆ Thoroughfare Plans:  
Boone (1964, 1979, 1991)  
Watauga County (1989, Region D 1993, 2001)
- ◆ Improvements to US 421 listed in the TIP  
as an ‘unfunded project’ U-2703
- ◆ Request by Boone Town Council for NCDOT  
to study U-2703
- ◆ Systems-Level Environmental Review:  
Draft Report, Public Meetings,  
Coordination with Agencies (1997-98)
- ◆ Town Council asks NCDOT to study  
additional alternatives
- ◆ Local Transportation Task Force develops  
a new alternative (2000)
- ◆ Request by Boone Town Council for NCDOT  
to continue the study and to include  
the Task Force alternative
- ◆ NCDOT announces U-2703 will be studied through  
the Pre-TIP Process (2002)

### **III. Study Area and Project Information**

#### **A. General Information**

**U-2703 TIP (2004-2010)** – Boone, Watauga County; US 421 (King Street) from NC 105 Bypass to east of SR 1514 (Bamboo Rd)

**Type of Document to Address Improvements:** Currently, the environmental document is expected to be an Environmental Impact Statement. No schedule has been established for the planning document, right of way, or construction since the project is currently unfunded.

**Other TIP Projects in the Area:**

- *R-2615 and R-2615A* – US 421/321 widen to multi-lanes from proposed bypass (U-2703) to proposed bypass in Boone; unfunded project.
- *R-2566* – NC 105 widen to multi-lanes from US 221 to SR 1107; Planning State Fiscal Year (SFY) 04, Design SFY07, Right-of-Way SFY09, Construction Post Years.
- *R-2237*- US 321 widen to multi-lanes from NC 268 to north of Blowing Rock; Right-of-Way part in acquisition and part SFY07, Construction part FFY05 and part SFY 07 and part Post Years.
- *US 421 widen to multi-lanes from Winston-Salem to Boone* – part complete;  
R-2239 Wilkesboro in Wilkes County to I-77 in Yadkin County, construction completion 7/04;  
R-2240 Maple Springs to NC 268 in Wilkesboro, construction completion 12/03.

**Purpose and Need of the Project:** The purpose of this project is to relieve congestion and improve safety on US 421 (King Street) in the vicinity of Boone, as well as to improve system linkage to US 321, US 221, and NC 105.

#### **B. Existing Conditions**

**Functional Classification:** US 421 in the vicinity of Boone is classified as a principal arterial.

**Development Along Project:** Most of the retail and commercial development in Boone is along US 421 (King Street), US 321 (Blowing Rock Road), and NC 105. US 421 (King Street) in Boone is the location of the traditional downtown storefronts. Additionally, it should be noted that the Boone Mall is located on US 321, south of the intersection with NC 105.

Appalachian State University (ASU) is located southwest of the intersection of US 421 (King Street) and US 321. ASU campus can be accessed off of US 321 by Rivers Street or off of US 421 (King Street) by College Street, Depot Street, or other intersecting roads. Watauga High School is located on NC 105, west of the intersection with US 321. The Watauga Medical Center and the Boone Golf Club are both located off of US 321 in the southern-most part of the town limits. Additional development is currently occurring in various locations throughout the area, especially along US 321 (Blowing Rock Road).

**Existing Roadways:** US 421 (King Street): From NC 105 Bypass to NC 105 Extension/ US 221 the existing road is two lanes, two-way. The speed varies from 20 to 45 mph and there is on street parking which varies from one side to both sides as well as from parallel to angled spaces. From NC 105 Extension/ US 221 to the relocation of US 421 east of SR 1514 (Bamboo Road) the existing road cross section varies from two to four and five lanes and the speed limit varies from 35 to 45 mph.

**Intersections:** US 421 has many signalized intersections with other facilities, including US 221 (NC 105 Extension) and US 321, and NC 105 Bypass.

**Railroads:** There are no significant railroad impacts on this project.

**Bicycle and Pedestrian Facilities:** US 421 (King Street) has sidewalks along portions of the downtown area, which vary from one to both sides of the road. The Boone/ Blowing Rock Alternative Transportation Plan, adopted by the Boone Town Council on November 20, 1995, includes long range plans for additional pedestrian and bicycle facilities along US 421 as well as other roadways.

**Traffic Volumes:** Refer to the attached figures for the 2001 and 2020 forecasted Average Daily Traffic (ADT) for the facilities for Build and No Build.

**Safety Analysis:** Crash rates on US 421(King Street) in the vicinity of Boone are currently significantly higher than the average rate for North Carolina. For the three year period from May of 1999 to April of 2002, there were 566 reported crashes on US 421 (King Street) from NC 105 Bypass west of Boone to Bamboo Road (SR 1514) east of Boone. This corresponds to 701.2 accidents for every 100 million vehicle miles traveled along US 421 compared to an average rate of 211.4 accidents per 100 million vehicle miles along other US routes statewide.

**Potential Environmental Concerns:**

- **River Crossings** – This project will likely require a crossing of the South Fork of the New River, as well as Winklers Creek.
- **Water Resources** – There are surface water intake points, high quality outstanding resource water zones, designated trout waters, and significant aquatic endangered species habitats in the project area.

**Potential 4(f) Involvement:**

- **Parks** - The Town of Boone has a greenway and planned park in the vicinity of the South Fork of the New River south of US 421 west of Boone and northeast of US 321 south of Boone. Avoidance alternatives will need to be considered.

**Historic/Architectural Resources:**

There are several National Register Historic structures in the project area along existing US 421. It has been suggested that the a structure on Blairmount Road, which lies within the project limits, may be an eligible historical property.

A comprehensive archaeological survey needs to be conducted to identify and evaluate the significance of archaeological remains that may be impacted by the proposed project.

**Community Profile:**

The Office of Human Environment is performing a preliminary community profile for the project area. Neighborhoods that have expressed concern about the project include Blairmont, Ravens Ridge, Snaggy Mtn, and Jordan V. Cook Rd.

**C. Proposed Improvements**

**Alternatives to be Considered:** There are currently multiple alternatives on new location being considered, both to the north and the south of existing US 421. Widening of the existing facility is also an alternative.

**Proposed Typical Section:** The typical section for alternatives on new location is 4-lane, 76-foot section with median and paved shoulders. The typical section for the alternative to widen the existing roadway is a five-lane, 64-foot face-to-face, curb and gutter section.

## Schedules and Cost Estimates

### TIP Schedule:

The TIP Schedule will be established after the project is funded.

### Tentative Project Schedule:

<i>Concurrence Point 1</i>	January 2003
<i>Citizens Informational Workshop</i>	January 2004
<i>Concurrence Point 2</i>	Spring 2004

### Cost Estimate:

Right of Way	\$ 93,800,000
Construction	<u>\$ 46,000,000</u>
Total:	\$139,800,000

## **IV. Comments Received/ Topics Discussed**

### 1) Rail Division

November 10, 2003 Memorandum from  
James Harris, P.E., Engineering Manager- Tracks & Structures;  
No rail interaction is anticipated on the project.

### 2) Geotechnical Engineering Unit

November 2003 Memorandum from  
Louis L. Acker, LG, Asheville Area Office;  
Summary Recommendations: Corridors 1, 1A, 1B, 2, 2A, and 3 are the least favorable from a geotechnical point of view. Corridor 5 is also highly unfavorable due to the large amount of earthwork that would be required. Corridor 6 and Corridor 2 north of Wilson Ridge are probably the most favorable choices, although Corridor 6 would require considerably more earthwork than some of the routes listed above as unfavorable. Corridor 2B would be the preferred choice if a shorter route, closer in to the commercial center is desired.

### 3) Discussion during the Scoping Meeting on December 2, 2003

- The planned expansion of the Town of Boone's greenway system will be added to the project mapping.
- The traffic projections to the year 2020 will be used for the duration of this Pre-TIP Study. Statewide Planning intends to update the Town of Boone's Thoroughfare Plan when resources are available. After the project is funded and the Merger Process continues, the traffic volumes will be updated to increase the horizon year and to use newer traffic counts which will show the affect of the US 421 improvement projects that are now underway.
- There is a study underway to consider where educational facilities will be located in the future. One possibility is that the Watauga High School site will be abandoned.  
(Subsequent discussion with Watauga County officials indicated that this possibility is not imminent or likely).
- The development of Alternative 6 by the local Task Force was discussed. This history was also reviewed with the Merger Team in the initial Kick-Off/ Scoping Meeting. It will be highlighted again at future Merger Team meetings.

- A combination of Alternatives 6 to the west and 3 to the east was suggested and will be considered further.
- All the alternatives will be shown at an upcoming public workshop. Based on information on these alternatives and input from the workshop, a recommendation will be made to the Merger Team concerning which alternatives should be carried forward for further study.



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## **NEPA/ 404 MERGER CONCURRENCE POINT #2**

### **ALTERNATIVES TO BE CARRIED FORWARD FOR DETAILED STUDY**

#### **US 421 Improvements TIP Project U-2703**

#### **Boone, Watauga County**

March 15, 2005

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## **TIP Project U-2703 US 421 Improvements Boone, Watauga County**

### **Meeting Objectives**

The purpose of this merger project team meeting is to consider information regarding alternative corridors for TIP Project U-2703. The project team will then decide on alternatives to carry forward. Preliminary study corridors based on functional designs are being presented as a starting point. The project team will then decide to eliminate or add additional alternatives.

### **Project Description**

TIP Project U-2703 is for improvements to the US 421 corridor in the vicinity of Boone in Watauga County. This project is included in the 2004-2010 North Carolina Transportation Improvement Program (TIP) for environmental review, but is an unfunded project. This Pre-TIP Study is being conducted to reach Concurrence Points 1 and 2 prior to the funding in the TIP. The remainder of the NEPA/ 404 Merger Process would then be followed after a funding decision is made.

### **Project History and Schedule**

Proposals to improve the US 421 corridor in the vicinity of Boone, specifically by rerouting it to new location, have been included on the local long range transportation plans since the 1970s. At the request of the Town of Boone in the mid-1990s, NCDOT's Transportation Planning Branch conducted a preliminary environmental review. Then a local transportation task force formed to consider improvement options.

In 2002, the Town of Boone again requested that NCDOT begin a more detailed study of alternatives, including the task force's recommendations. In response, NCDOT started this Pre-TIP Study. The merger project team met on September 18, 2002 for a Scoping/ Kick Off Meeting and again on January 22, 2003 to reach concurrence on Purpose and Need. A Citizen's Informational Workshop was held on March 11, 2004.

Since TIP Project U-2703 is an unfunded project, there is no right of way acquisition or construction schedule set. The project schedule will be determined when a funding decision is made.

## Project Purpose and Need

The Purpose and Need was concurred upon at the merger meeting on January 22, 2003. The Purpose and Need summary statement is as follows:

*Improvements to the US 421 corridor in the vicinity of Boone are needed to improve mobility and safety. The need to reduce congestion along US 421 (King Street), as well as US 321, US 221, and NC 105, is indicated by the fact that these facilities are currently near or exceeding their capacity and are projected to be over capacity in 2020 by 20 to over 75%. The need for safety improvements is evidenced by current accident rates along US 421 (King Street) and the other major facilities, which are higher than the statewide average.*

*Improvements to US 421 in the vicinity of Boone should serve the following purpose:*

- *Reduce the mixed use of US 421 (King Street) through downtown Boone by local and through traffic*
- *Improve system linkage for US 421 and the other major facilities*
- *Improve traffic flow along US 421 and the other major facilities*
- *Improve safety along US 421*

## Proposed Study Corridor Alternatives

Several alternatives have been developed in early planning for the project. (Refer to the attached figure titled 'Corridor Alternatives to Study Further'). Each of the corridors extends from US 421 west of the Town of Boone in the vicinity of SR 1107 (NC 105 Bypass), intersects US 321/221 south of NC 105, and ends at US 421 east of Boone. Each corridor provides interchanges at US 421/321 west, NC 105, US 321/221 south, and US 421/221 east of Boone.

- **Corridor 1** extends from US 421/321 east of SR 1107 (NC 105 Bypass) on new location then utilizes part of the existing SR 1107. It continues on new location, intersecting US 321/221 south of NC 105 and ending at US 421/221 east of Boone in the vicinity of the western intersection with US 421/221 and Old US 421.
- **Corridor 2** uses existing SR 1107 from US 421/321 west of Boone to NC 105. It continues on new location, intersecting US 321/221 in the vicinity of SR 1522 (Deerfield Rd) and ending at US 421/221 east of Boone (similar location to the end of Corridor 1).
- **Corridor 3** extends from US 421/321 west of SR 1107 on new location, intersecting NC 105 west of SR 1107. It continues on new location, intersecting

US 321/ 221 in the vicinity of SR 1543 (Jordan V. Cook Rd) and ending at US 421/221 east of the intersection of US 421 and Old US 421.

- **Corridor 4** follows Corridor 2 from US 421/321 west of Boone to the interchange location on US 321/221. Then Corridor 4 deviates from Corridor 2, extending further south as it continues east of US 321/221 and ending at US 421/221 east of Boone in the vicinity of the eastern intersection with US 421/221 and Old US 421.

Corridor combinations can be created from the 4 corridors listed above. Each corridor can be divided into sections, as shown on the attached figure. Section A is from US 421/321 west of Boone to NC 105, Section B is from NC 105 to US 321/221, and Section C is from US 321/ 221 to US 421/221 east of Boone. To further aid in combining various sections of the corridors, several corridor ‘connectors’ are shown. For example, to combine Corridor 1 to the west with Corridor 2 to the east in Section B, the ‘1B to 2B Connector’ would be used.

### **Summary of Public Input**

Information on the purpose and need for the project and preliminary corridor alternatives were shared at a Citizen’s Informational Workshop on March 11, 2004. Comments were received through provided comment forms and a ‘Post It Board’ exercise, where citizens were asked to post their top 4 goals for the proposed project.

The most common comments were on the nature of the traffic solutions needed in the area, such as desire to ensure consideration of no-sprawl options, use of existing corridors, and offering more transit options. The next most common comments were in support of maintaining the local character of neighborhoods and community cohesion and protecting important local resources such as water quality and scenic vistas. Concerning comments specific to the proposed corridor alternatives, Corridors 3 and 4 received the most comments. Corridors 3 and 4 were both the most favored and the least favored by local citizens. In 2001, a local task force had developed and shown the public the B and C sections of Corridor 3, referring to it as the ‘Daniel Boone Parkway.’

### **Alternative Comparisons**

Following is a comparison of the proposed study corridor alternatives. The total impacts were based on an assumed 300’ right of way within the 1000’ corridor. A precursory community impacts assessment, titled ‘Pre-TIP Community Study’ and dated January 2005, has been conducted. Analysis of community characteristics was completed at the census block group level. This assessment categorized Corridors 1 and 2 as urban commercial alternatives and Corridors 3 and 4 as rural alternatives. The urban commercial alternatives are expected to result in more displacements, but lower potential to cause changes to existing types of development.

## U-2703 Alternatives Comparison

CATEGORY	CORRIDORS <sup>1</sup>			
	Corridor 1	Corridor 2	Corridor 3	Corridor 4
Length (miles)	6.0	7.5	10.1	9.4
Number of Interchanges	4	4	4	4
Parcels Taken or Partially Impacted	399	490	378	570
Structures (Residents or Businesses)	318	384	168	334
Public Schools <sup>2</sup>	1a	1b	1b	1b
Parks <sup>3</sup>	0	0	1a	0
Churches	2	4	2	4
Cemetaries	0	0	0	0
National Register Historic Structures	0	0	0	0
Natural Heritage Occurrence Sites (Known Federal Listed Species Habitat) <sup>4</sup>	1a	2a,b	0	0
Hazardous Material Sites <sup>5</sup>	2	6	2	3
National Wetlands Inventory- Wetland Impacts (acres)	0	1	0	1
Water Supply Watersheds Total (acres)	0	104	193	144
Critical Water Supply (acres)	0	50	31	20
High Quality Outstanding Resource Water Zones (acres)	0	39	62	39
FEMA 100 Year Floodplain Impacts (acres)	31	42	46	27
Number of Stream Crossings	7	6	10	6
Length of Stream Within the Corridor (feet)	9800	7900	13900	8600
Projected 2020 Traffic Use <sup>6</sup>	35,800 - 47,400	35,300 - 47,100	30,300 - 39,400	35,600 - 32,200
Estimated Cost (millions)	149.4	182.7	293.7	193.7

### NOTES:

Source: Geographic Information Systems (GIS) data from the Center for Geographic Information and Analysis (CGIA) and various agencies.

<sup>1</sup> Impact Totals are based on an assumed right of way width of 300' within the 100' corridor, with a larger area of approximately 44 acres assumed at interchange locations.

<sup>2</sup> Schools: a-Watuaga High School, b-Caldwell Community College

<sup>3</sup> Parks: Boone Greenway

<sup>4</sup> Natural Heritage Occurrence Sites: a, b refer to different species

<sup>5</sup> Hazardous Materials Sites includes National Pollutant Discharge Elimination System Sites, Hazardous Waste Facilities, Solid Waste Facilities and Groundwater Incidents.

<sup>6</sup> Projected 2020 Traffic Use is an estimated range of the Average Daily Traffic expected to use the new facility between NC 105 and US 421/221 east of Boone.

**Note: Also attached Figure 7: Corridor Alternatives to Study Further & Figure 7b: Corridor Alternatives & Environmental Data**



## **MERGER TEAM**

### **Alternatives to Be Carried Forward for Detailed Study Meeting Concurrence Point 2**

#### Date/ Time

March 15, 2005  
1:00 pm

#### Location

Raleigh, NC  
NCDOT Transportation Building,  
Board Room

## **PURPOSE**

To reach concurrence with the merger team on the Alternatives to be Carried Forward for Detailed Study for TIP Project U-2703.

## **ATTENDEES**

#### Name

#### Organization

Ron Allen	NCDOT/ Roadway Design
David Baird	High Country RPO
Trent Beaver	NCDOT Division 11, via video conference
Mike Bruff	NCDOT/ Transportation Planning Branch (TPB)
Marla Chambers	NC Wildlife Resource Commission
David Chang	NCDOT/ Hydraulics
Alena R. Cook	NCDOT/ TPB
Felix Davila	FHWA
Harold Draper	Tennessee Valley Authority
Tim Gardiner	NCDOT/ Office of Human Environment (OHE)
Gary Lovering	NCDOT/ Roadway Design
Sarah McBride	DCR/ State Historic Preservation Office (SHPO)
Eric Midkiff	NCDOT/ PDEA
Christopher Militscher	USEPA- Raleigh
Michael Pettyjohn	NCDOT Division 11, via video conference
Jerry Snead	NCDOT/ Hydraulics
Dan Thomas	NCDOT/ TPB
John Thomas	US Corps of Engineers
Beverly Williams	NCDOT/ TPB
Brian Wrenn	NC Division of Water Quality
(Marella Buncick	US Fish and Wildlife Service- absent, briefed after meeting)

## **AGENDA**

- 1) Introductions/ Meeting Objectives
- 2) Project History/ Summary of Previous Meetings
- 3) Discussion on Alternatives
- 4) Alternatives to be Carried Forward Identified
- 5) Other Comments or Issues

# **MEETING SUMMARY**

## **1) Introductions/ Meeting Objectives**

The meeting was started with an explanation of the meeting purpose and an overview of the agenda. All attendees introduced themselves. The packet for the meeting, dated March 15, 2005, was referenced.

## **2) Project History/ Summary of Previous Meetings**

An overview was given of unfunded TIP Project U-2703 and the Pre-TIP Study Process. A summary was given of the previous merger team meetings, the Scoping/ Kick Off Meeting held on September 18, 2002 and the Purpose and Need Meeting on January 22, 2003. The Purpose and Need that was concurred upon was referenced on page 2 of the packet.

## **3) Discussion on Alternatives**

The proposed study corridor alternatives were discussed. The team was referred to maps in the packet of the proposed corridor alternatives on a base map and an environmental features map. Additional display size maps were available, including individual maps of each alternative with its 1000-foot corridor shown. It was noted that the maps show the corridors divided into 3 sections (A, B, and C) with connectors so that sections of different alternatives could be combined, if needed.

Each corridor was described (see page 2 of the meeting packet). Any alternative would be designed as fully access controlled, with access only provided at interchanges. Additional comments based on the information currently available were made about each corridor. Corridor 1 is the closest to the Thoroughfare Plan alignment, is the shortest route, and has the least impacts to water resources. Corridor 2 is further than Corridor 1 from the Watauga High School and Appalachian State University properties. Corridor 3 is the option developed in 2001 by a local task force, which included representatives from the Town of Boone, Watauga County, Boone Area Chamber of Commerce, and ASU. Corridor 3 has the least impacts to the built environment and the least displacements. Corridor 4 is the only alternative that is further south of the Watauga Medical Center, the greenway, and the South Fork of the New River.

The public input received to date was discussed (see page 3 of the meeting packet). A Citizen's Informational Workshop was held on March 11, 2004. The comments received during the workshop and later from surveys were discussed. The team's discussion included noting that many comments were about protecting neighborhoods and natural resources, particularly water resources. Corridors 3 and 4 received the most comments and were both the most favored and the least favored alternatives by the public. Concerns from local officials were noted, such as the proximity of Corridor 1 to Watauga High School and NC 105 and this corridor's possible impacts to the ASU Athletic Complex property.

The corridor alternatives were discussed in detail. Refer to page 3 and 4 of the meeting packet for a comparison of the alternatives. It was noted that the total impacts were based on an assumed 300-foot right of way within the 1000-foot corridor, plus a wider area of approximately 44 acres at proposed interchange locations. The precursory community impacts assessment titled 'Pre-TIP Community Study' and dated January 2005 was referenced.

There was discussion about the congestion in the area and the impact of the proposed alternatives on traffic. Options that had been considered but not brought forward were discussed, such as the following.

An alternative to the north of US 421 would not meet the purpose and need for the project in that it would not adequately serve the transportation need to improve system linkage, traffic flow, and safety. Its projected traffic use was low because it did not provide direct connections to US 321/ 221 south of Boone and NC 105 to the west. It also would have among the highest community impacts (refer to the 'Pre-TIP Community Study').

An option to widen the existing US 421 (King Street) or other existing roads would not meet the purpose and need for the project because they could not adequately provide the needed improvements to traffic flow and safety. In addition, widening King Street would not improve the system linkage to US 321/221 and NC 105 and would have the highest community impacts. Widening this facility would also fail to reduce the mixed use of King Street by local and through traffic. Widening other existing roads had additional right of way impacts and design constraints in trying to provide adequate capacity to handle the travel demand.

Other options were mentioned that would not meet the purpose and need, such as rerouting trucks (because trucks are currently rerouted and would not impact a significant enough volume of vehicles) and other modes such as transit (because they would not meet purpose and need to reduce mixed use by local and through traffic, would not improve system linkage, and would not impact a significant enough amount of travel demand).

A comment was made that Corridor 4 needs to be checked to ensure there are no conflicts with the flight patterns for the Boone airport. Other transportation projects planned in the area were discussed.

#### **4) Alternatives to be Carried Forward Identified**

The merger team requested that the impacts information (the table titled 'U-2703 Alternatives Comparison' on page 4 of the packet) be broken out by sections A, B, and C of each alternative. It was agreed that this data would be compiled and sent back to the merger team for their review. The merger team agreed to reach concurrence on the alternatives, contingent upon not having further comment based on the impacts information broken out by section.

The merger team agreed that the Alternatives to Be Carried Forward for Detailed Study would be the corridors numbered 1 through 4, as described in the merger project team packet dated March 15, 2005 and shown on the figure titled 'Corridor Alternatives to Study Further,' dated February 11, 2005. All merger team members present signed the concurrence form, with the condition added to the bottom of form that 'This concurrence is effective if there are no subsequent comments after review of the information on corridors by section.'

#### **5) Other Comments or Issues**

The meeting was concluded, as there were no other comments or issues.

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

May 23, 2006

**MEMORANDUM**

To: John Thomas, US Army Corps of Engineers  
Jake Riggsbee, Federal Highway Administration  
Marella Buncick, US Fish and Wildlife Service  
Brian Wrenn, NC Division of Water Quality  
Marla Chambers, NC Wildlife Resources Commission  
Sarah McBride, State Historic Preservation Office  
Christopher Militscher, US Environmental Protection Agency  
Harold Draper, Tennessee Valley Authority

From: Alena R. Cook, P.E., NCDOT Transportation Planning Branch

Subject: Alternatives to Carry Forward Concurrence for TIP Project U-2703,  
Proposed Improvements to the US 421 Corridor in the  
Vicinity of Boone, Watauga County

The Merger Team for this project held the Concurrence Point 2 Meeting- Alternatives to Be Carried Forward for Detailed Study on March 15, 2005. At that meeting, the team reached concurrence on the alternatives to be carried forward, provided that the impacts information be broken out for the alternatives by section. The merger team members signed the concurrence form with the following stipulation, 'This concurrence is effective if there are no subsequent comments after review of the information on corridors by section.'

The impacts information has been broken out by sections for each alternative to be carried forward, as shown in the attached tables. Also included are a summary of the alternatives meeting, the concurrence form, and maps of the alternatives. You are encouraged to review this attached information along with the March 15, 2005 meeting packet.

Once you have reviewed the impacts information for the alternatives by section, please submit your comments (or indicate that you have none) to me via letter or e-mail at [arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us). Your response is requested by June 28, 2006. Please contact me at (919) 715-5737 extension 70 if you have any questions or need additional information. After all comments are received, a new concurrence form will be circulated for your signature so that the contingency on the current form will be documented as being fulfilled. Thank you for your prompt attention to this matter.

Enclosures

**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION PLANNING BRANCH  
1554 MAIL SERVICE CENTER  
RALEIGH NC 27699-1554

**NCDOT | TPB**  
TRANSPORTATION PLANNING BRANCH  
[www.NCDOT.ORG](http://www.NCDOT.ORG)

**LOCATION:**  
TRANSPORTATION BUILDING  
1 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
Phone: 919-733-4705  
Fax: 919-733-2417

Cc: Phillip Trew, AICP, High Country RPO  
Craig Hughes, AICP, High Country RPO  
Loretta Barren, FHWA  
Michael Pettyjohn, PE, Division 11 Engineer  
Trent Beaver, PE, Division 11 Construction Engineer  
Eric Midkiff, PE, PDEA  
Teresa Hart, PE, PDEA  
Ron Allen, PE, Roadway Design Unit  
Gary Lovering, PE, Roadway Design Unit  
Tim Gardiner, AICP, Human Environment Unit  
Mike Bruff, PE, TPB  
Beverly Williams, TPB  
Jaime Adrignola, TPB

## U-2703 Alternatives Comparison<sup>1</sup> Alternatives to Be Carried Forward for Detailed Study

CATEGORY	CORRIDOR 1				CORRIDOR 2				CORRIDOR 3				CORRIDOR 4			
	Section 1A	Section 1B	Section 1C	TOTAL Corridor 1	Section 2A	Section 2B	Section 2C	TOTAL Corridor 2	Section 3A	Section 3B	Section 3C	TOTAL Corridor 3	Section 4A	Section 4B	Section 4C	TOTAL Corridor 4
Length (miles)	1.6	2.5	1.9	<b>6.0</b>	1.7	3.2	2.6	<b>7.5</b>	2.6	4.1	3.4	<b>10.1</b>	1.7	3.2	4.5	<b>9.4</b>
Number of Interchanges	1	1	2	<b>4</b>	1	1	2	<b>4</b>	1	1	2	<b>4</b>	1	1	2	<b>4</b>
Parcels Taken or Partially Impacted	132	119	148	<b>399</b>	227	133	130	<b>490</b>	88	141	149	<b>378</b>	227	133	210	<b>570</b>
Structures (Residents or Businesses)	125	68	125	<b>318</b>	202	61	121	<b>384</b>	32	54	82	<b>168</b>	202	61	71	<b>334</b>
Public Schools <sup>2</sup>	0	1a	0	<b>1a</b>	1b	0	0	<b>1b</b>	1b	0	0	<b>1b</b>	1b	0	0	<b>1b</b>
Parks <sup>3</sup>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	0	0	1a	<b>1a</b>	0	0	0	<b>0</b>
Churches	1	0	1	<b>2</b>	3	1	0	<b>4</b>	2	0	0	<b>2</b>	3	1	0	<b>4</b>
Cemetaries	0	0	0	<b>0</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>
National Register Historic Structures	0	0	0	<b>0</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>
Natural Heritage Occurrence Sites (Known Federal Listed Species Habitat) <sup>4</sup>	0	0	1a	<b>1a</b>	0	0	2a,b	<b>2a,b</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>
Hazardous Material Sites <sup>5</sup>	0	2	0	<b>2</b>	2	1	3	<b>6</b>	0	0	2	<b>2</b>	2	0	1	<b>3</b>
National Wetlands Inventory- Wetland Impacts (acres)	0	0	0	<b>0</b>	0	1	0	<b>1</b>	0	0	0	<b>0</b>	0	1	0	<b>1</b>
Water Supply Watersheds Total (acres)	0	0	0	<b>0</b>	0	39	65	<b>104</b>	0	90	103	<b>193</b>	0	39	105	<b>144</b>
Critical Water Supply (acres)	0	0	0	<b>0</b>	0	20	30	<b>50</b>	0	15	16	<b>31</b>	0	20	0	<b>20</b>
High Quality Outstanding Resource Water Zones (acres)	0	0	0	<b>0</b>	0	39	0	<b>39</b>	0	62	0	<b>62</b>	0	39	0	<b>39</b>
FEMA 100 Year Floodplain Impacts (acres)	3	13	15	<b>31</b>	1	12	29	<b>42</b>	1	10	35	<b>46</b>	1	12	14	<b>27</b>
Number of Stream Crossings	1	3	3	<b>7</b>	1	2	3	<b>6</b>	1	5	4	<b>10</b>	1	2	3	<b>6</b>
Length of Stream Within the Corridor (feet)	2400	4200	3200	<b>9800</b>	1400	3700	2800	<b>7900</b>	2400	4800	6700	<b>13900</b>	1400	3700	3500	<b>8600</b>
Projected 2020 Traffic Use <sup>6</sup>	-	-	-	<b>35,800 - 47,400</b>	-	-	-	<b>35,300 - 47,100</b>	-	-	-	<b>30,300 - 39,400</b>	-	-	-	<b>35,600 - 32,200</b>
Estimated Cost (millions)	-	-	-	<b>149.4</b>	-	-	-	<b>182.7</b>	-	-	-	<b>293.7</b>	-	-	-	<b>193.7</b>

**NOTES:**

Source: Geographic Information Systems (GIS) data from the Center for Geographic Information and Analysis (CGIA) and various agencies.

<sup>1</sup> Impact Totals are based on an assumed right of way width of 300' within the 1000' corridor, with a larger area of approximately 44 acres assumed at interchange locations.

<sup>2</sup> Schools: a-Watuaga High School, b-Caldwell Community College

<sup>3</sup> Parks: Boone Greenway

<sup>4</sup> Natural Heritage Occurrence Sites: a, b refer to different species

<sup>5</sup> Hazardous Materials Sites includes National Pollutant Discharge Elimination System Sites, Hazardous Waste Facilities, Solid Waste Facilities and Groundwater Incidents.

<sup>6</sup> Projected 2020 Traffic Use is an estimated range of the Average Daily Traffic expected to use the new facility between NC 105 and US 421/221 east of Boone.

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## U-2703 Alternatives Comparison<sup>1</sup> Alternative Sections Using Connectors

CATEGORY	Section 1B Alt (Using 2B to 1B Connector)	Section 2/4B Alt (Using 1B to 2B Connector)	Section 2C Alt (Using 2B to 3C Connector)
Length (miles)	2.8	3.2	3.3
Number of Interchanges	1	1	2
Parcels Taken or Partially Impacted	102	143	126
Structures (Residents or Businesses)	60	63	79
Public Schools <sup>2</sup>	0	1a	0
Parks <sup>3</sup>	0	0	0
Churches	0	1	0
Cemetaries	0	0	0
National Register Historic Structures	0	0	0
Natural Heritage Occurrence Sites (Known Federal Listed Species Habitat) <sup>4</sup>	0	0	1a
Hazardous Material Sites <sup>5</sup>	1	1	1
National Wetlands Inventory- Wetland Impacts (acres)	0	0	0
Water Supply Watersheds Total (acres)	33	0	26
Critical Water Supply (acres)	14	0	5
High Quality Outstanding Resource Water Zones (acres)	33	0	0
FEMA 100 Year Floodplain Impacts (acres)	8	10	33
Number of Stream Crossings	2	2	4
Length of Stream Within the Corridor (feet)	3000	3200	4300

**NOTES:**

Source: Geographic Information Systems (GIS) data from the Center for Geographic Information and Analysis (CGIA) and various agencies.

Use of Alternative Sections: Section 1B Alt can be used to replace Section B for Corridor 1. Section 2/4B Alt can be used to replace Section B for Corridors 2 or 4. Section 2C Alt can be used to replace Section C for Corridor 2. Other combinations of sections may also be possible. For example, Section 1A and Section 2A/4A are interchangeable for use with Corridors 1, 2, and 4.

<sup>1</sup> Impact Totals are based on an assumed right of way width of 300' within the 1000' corridor, with a larger area of approximately 44 acres assumed at interchange locations.

<sup>2</sup> Schools: a-Watuaga High School, b-Caldwell Community College

<sup>3</sup> Parks: Boone Greenway

<sup>4</sup> Natural Heritage Occurrence Sites: a, b refer to different species

<sup>5</sup> Hazardous Materials Sites includes National Pollutant Discharge Elimination System Sites, Hazardous Waste Facilities, Solid Waste Facilities and Groundwater Incidents.

**Note: Also attached Figure 7c: Corridor  
Alternatives (1000-ft Study Corridors)**

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## **Appendix C**

### **Concurrence on Purpose and Need**

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## Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 1 - Purpose and Need

TIP No./Name/Description:

TIP No. U-2703

Upgrade US 421 in the vicinity of Boone, Watauga County

### Purpose and Need of Proposed Project:

Improvements to the US 421 corridor in the vicinity of Boone are needed to improve mobility and safety. The need to reduce congestion along US 421 (King Street), as well as US 321, US 221, and NC 105, is indicated by the fact that these facilities are currently near or exceeding their capacity and are projected to be over capacity in 2020 by 20 to over 75%. The need for safety improvements is evidenced by current accident rates along US 421 (King Street) and the other major facilities, which are higher than the statewide average.

Improvements to US 421 in the vicinity of Boone should serve the following purpose:

- Reduce the mixed use of US 421 (King Street) through downtown Boone by local and through traffic
- Improve system linkage for US 421 and the other major facilities
- Improve traffic flow along US 421 and the other major facilities
- Improve safety along US 421

The Project Team concurred on this date of January 22, 2003, with the purpose of and need for the proposed project as stated above.

USACE John J. Thomas Jr. 5/2/03 NCDOT Alma R. Goh 6/23/03

FHWA Ther D. Riggs 7/18/03 USFWS Martha A. Brink 7/18/03

NCDWQ Beth Haines Barnes 7/23/03 NCWRC Mark Chamber 7/24/03

NCDCR Steve R. Rife 8/18/03 USEPA Celia 7/23/03

TVA Harold M. Draper 4/7/2003

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## **Appendix D**

### **Concurrence on Alternatives to be Carried Forward for Detailed Study**

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**Section 404/NEPA Merger Project Team Meeting Agreement**  
**Concurrence Point No. 2 --**  
**Alternatives to be Carried Forward for Detailed Study**

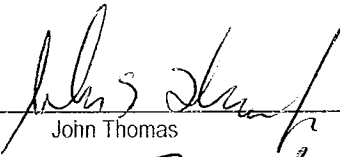

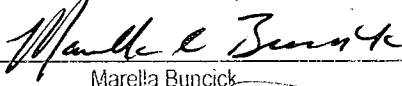
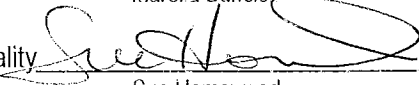


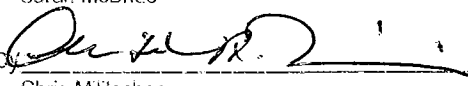
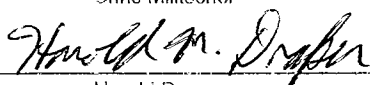
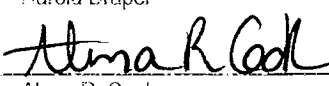
TIP No./Name/Description:

TIP No. U-2703

Upgrade US 421 in the vicinity of Boone, Watauga County

The Project Team concurred with the Alternatives to be Carried Forward for Detailed Study for the proposed project after a Merger Team Meeting on March 15, 2005 and subsequent review of additional information provided May 23, 2006. The alternatives to be carried forward are corridors 1 – 4 as described in the merger project team packet dated March 15, 2005 and shown on the figure titled 'Corridor Alternatives to Study Further,' dated February 11, 2005. Combinations of these alternatives may also be considered further, by combining sections of different alternatives and using the connectors shown. These alternatives will be carried forward in the 404/ NEPA Merger Process for further evaluation after a funding decision is made on this project.

The Project Team Members listed below have concurred with Concurrence Point 2 for this project.

US Army Corps of Engineers	 John Thomas	10/26/06 DATE
Federal Highway Administration	 Jake Riggsbee	10/23/06 DATE
US Fish & Wildlife Service	 Marella Buncick	11/13/06 DATE
NC Division of Water Quality	 Sue Homewood	12/11/06 DATE
NC Wildlife Resources Commission	 Marla Chambers	12/4/2006 DATE
State Historic Preservation Office	 Sarah McBride	11/16/06 DATE
US Environmental Protection Agency	 Chris Militscher	11/16/06 DATE
Tennessee Valley Authority	 Harold Draper	12/15/06 DATE
NC Department of Transportation	 Alena R. Cook	10/23/06 DATE

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## **Appendix E**

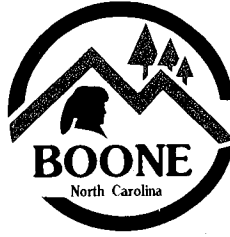
### **Local/ Public Involvement**

#### List of Items Included in Appendix E:

- Study Request from the Town of Boone & Task Force Recommendation (2001)
- Summary of Citizens Comments and Concerns from March 11, 2004 Citizens Informational Workshop (Produced by URS Inc.), dated September 26, 2004
- Summary of Stations 1-4 from March 11, 2004 Citizens Informational Workshop
- Excerpt from Pre-TIP Community Study (Produced by URS Corporation), dated February 2005

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# ***Town of Boone***



March 13, 2001

Ms. Alena Cook, Transportation Engineer  
Statewide Planning Branch  
Division of Highways  
NC Department of Transportation  
PO Box 25201  
Raleigh NC 27611

Dear Ms. Cook:

At their February 22, 2001, meeting the Boone Town Council accepted the attached report from the Transportation Task Force. Council unanimously recommended that DOT study as a bypass alternative the route proposed as the Daniel Boone Parkway. We understand this alternate route will be studied along with other previous alternatives.

We look forward to hearing your thoughts regarding the proposed route.

Sincerely,

A handwritten signature in cursive script that reads "Velma Burnley". The signature is written in dark ink and is positioned above the printed name and title.

Velma Burnley  
Mayor

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# **Community Transportation Task Force**

## **Recommendation to Core Partners**

The Transportation Task Force has completed its assignment, as directed by our core partners – Appalachian State University, the Town of Boone, Watauga County and the Boone Area Chamber of Commerce.

Our mission has been to address the long-term transportation needs of Boone and Watauga County and recommend a location for the corridor alignment of a limited access thoroughfare that is in the best interest of our community, and which also satisfies the requirements of the North Carolina Department of Transportation, for Transportation Improvement Program (TIP) Project U-2703.

It is important to reference the state mandate that US 421 provide safe, convenient, through-travel for motorists, consistent with the definition of the Intrastate System. Completing improvements to US 421 from I-40 to the Tennessee state line is important for connectivity to the rest of the Intrastate System. State law specifies that US 421 in Watauga County shall have at least four travel lanes.

The Task Force has identified a corridor for this route that it believes affects the fewest number of people, the fewest number of places (residential and business property) and is the least disruptive to the environment. This route has been modified in several places to reflect a number of suggestions received from citizens of the community as well as public officials. All of their input and feedback has been appreciated and given due consideration.

In general, the roadway would be a four-lane, limited access parkway, which would be constructed along a corridor that conforms with the east terminus points as proposed under Alternatives 1-4, previously presented by the NCDOT.

The Task Force recommends that the design and the construction of the roadway incorporate the full range of roadside beautification enhancements as outlined in the attached Planning Criteria.

The proposed route from the new US 421, which the Task Force recommends be designated as the Daniel Boone Parkway, would proceed in a westerly direction. It would contain several curves and bends to conform with topography and the desire to avoid populated sections of the county.

The general corridor would cross Bamboo Road and Wilson's Ridge Road, while passing between the Raven's Ridge and Blairmont subdivisions, skirting Hunting Hills and crossing Deerfield Road just west of the Middle Fork of the New River.

The corridor proceeds east of Watauga Medical Center area to intersect with US 321/221 near the Jordan Cook Road area.

The western portion of the route from US 321/221 to NC 105 proceeds beyond the Jordan Cook Road area to cross Deck Hill Road, Winkler's Creek Road, Snaggy Mountain Road and Poplar Grove Road before connecting with NC 105.

Although it is not part of the U-2703 project, the Task Force recommends that the Daniel Boone Parkway, as a four-lane roadway, extend along SR 1107 to US 421.

The Task Force believes this corridor most effectively addresses the Task Force Planning Criteria, as well as the NCDOT requirements, and has far less direct impact on the community than any of the 5 Alternatives previously presented by NCDOT.

The Task Force shall ask the Boone Town Council to take the following actions:

1. Agree to receive the recommendation from the Task Force.
2. Agree to be open to the consideration of the recommended alignment, in addition to the other Alternatives being studied by NCDOT, as a possible corridor location.
3. Agree to ask that the recommended alignment be given further study by NCDOT as a possible alternative.

February 22, 2001



## ***Daniel Boone Parkway***

### **Task Force Planning Criteria:**

- ✓ Must be a limited access roadway, with a maximum of three interchanges/points of access.
- ✓ Must alleviate traffic congestion in the Town of Boone.
- ✓ Must improve the movement of vehicles through and around Boone.
- ✓ Must follow a route that affects the fewest number of people, residences and existing businesses possible.
- ✓ Must follow a route that is the least disruptive to the environment and recreational areas.
- ✓ Must be built to accent and enhance the mountain character of the community.
- ✓ Must be constructed to offer maximum safety for motorists using the facility and the community as a whole.
- ✓ In support of these objectives, the Task Force strongly supports efforts to incorporate:
  - ▶ Landscaping and the use of rock walls and natural wooden guard rails to maximize the park-like qualities of the route.
  - ▶ Prohibitions on the use of commercial signage and outdoor advertising along the route.
  - ▶ Visual and sound barriers that are aesthetically pleasing, to be provided anywhere that light or noise levels from the parkway could adversely affect residential properties along the route.
  - ▶ Lighting only where necessary for safety and any such lighting would conform to standards approved by the International Dark-Sky Association.
  - ▶ Bicycle pathways adjacent to the roadway where feasible.
  - ▶ The latest design technology to avoid delays and congestion at access points, with special emphasis on a single point urban interchange planned at US 321/221 (Blowing Rock Road).
- ✓ In achieving these objectives, it is acceptable that the posted speed limit be less than

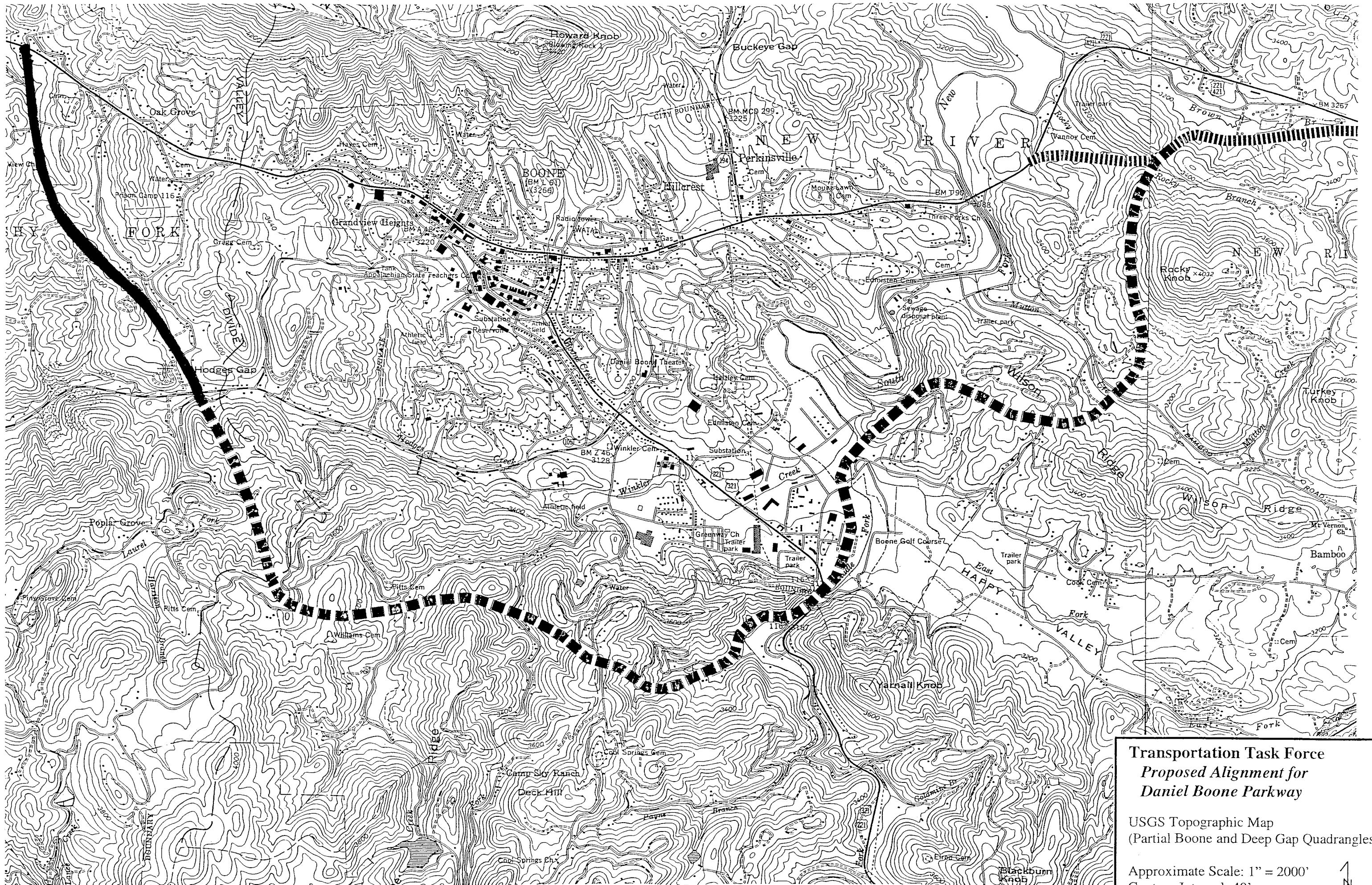
55 miles per hour.

- ✓ And finally, it must be cost-effective from a construction perspective.

**Task Force Directives to NCDOT:**

1. Commence the preliminary environmental study, with special emphasis on protecting the environment, safeguarding the Town of Boone water supply intakes, minimizing human impacts and preserving the mountain character of our community.
2. Expedite right of way acquisition procedures with the commitment to the fair and equitable treatment to all property owners affected by the corridor.
3. Continue open communications with all citizens to promote full understanding of the process and provide access to all public comment sessions, accommodating those citizens with special needs.

February 22, 2001



**Transportation Task Force**  
***Proposed Alignment for***  
***Daniel Boone Parkway***

USGS Topographic Map  
(Partial Boone and Deep Gap Quadrangles)

Approximate Scale: 1" = 2000'  
Contour Interval: 40'

1  
N

*Back of Figure*

## **Background Information Transportation Task Force**

### **Overview:**

Previous studies by the North Carolina Department of Transportation (NCDOT) have documented the traffic patterns and volume of vehicles traveling in and around Boone.

It is a fact that traffic is currently at or near capacity on all major roadways in the Town of Boone, and NCDOT forecasts serious “capacity deficiencies” by the year 2020.

### **NCDOT’s Proposed Project**

To help remedy the traffic situation in and around Boone, a southern thoroughfare connector (US 421 proposed bypass south) is identified as NCDOT Transportation Improvement Program (TIP) Project U-2703.

The roadway is proposed as:

*Having four lanes with a grass median.  
Being a controlled access facility with three interchanges.*

NCDOT presented, as recently as November 1999, five alternative routes or corridors. The common features are:

- ▶ Each would have a western terminus at the intersection of NC 105 and the NC 105 Bypass.
- ▶ Each would have an interchange/intersection at US 321/221 (Blowing Rock Road).
- ▶ Each would have an eastern terminus at the point of new US 421 (TIP R-529), which is currently under construction.

There would be no other points of ingress or egress to the limited access thoroughfare.

### **Corridor Concerns:**

#### ***Alternatives 1 & 2***

Cross the Greenway and the New River in two locations.  
Run parallel to Shadowline Drive, already a congested and developed area.  
Pass behind Watauga High School and connect to the existing NC 105 corridor.

At that point, Alternative 1 proceeds west via a widening of existing NC 105, whereas Alternative 2 would be a new roadway just south of existing NC 105.

***Alternatives 3 & 4***

Cross Bamboo Road, Wilson Ridge Road and Deerfield Road, following a path adjacent to Boone Golf Club and Watauga Medical Center.

Cross Blowing Rock Road near the existing Deerfield Road intersection.

Pass behind Watauga High School.

At that point, Alternative 3 is located farther south of existing NC 105 than in Alternative 2.

Alternative 4 follows the same corridor as Alternative 1.

***Alternative 5***

Branches off US 421 near Brown's Chapel Road and loops south of the golf course.

Crosses Blowing Rock Road at the same point as Alternatives 3 & 4.

From that point, follows Alternative 3.

The Boone Town Council, by taking no action to support any of these Alternatives, expressed its concern that each of these Alternatives has a serious impact on existing neighborhoods and businesses.

**Chronology of the Task Force:**

The Executive Committee of the Boone Area Chamber of Commerce approved the concept of forming a community-based task force on December 3, 1999, for the purpose of focusing expressly on TIP Project U-2703, which generally had been referred to as a Boone bypass or thoroughfare by the NCDOT.

Chamber leaders were asked to approach representatives from the Town of Boone, Watauga County and Appalachian State University in order to seek their support for this concept. An exploratory meeting was held on January 20, 2000, to discuss the need to move forward and attempt to develop a long-range highway construction plan that addresses the need for a beltway and to attain community consensus for the routing of this project.

In a memorandum dated January 31, 2000, the governing bodies of the four proposed core partners were asked to concur with the establishment of a task force and appoint three voting representatives. This memorandum was signed by: Velma Burnley, Mayor of the Town of Boone; Jimmy Hodges, Chair of the Watauga County Board of Commissioners; Frank Borkowski, Chancellor of Appalachian State University; and Tony Barlage, Chair of the Board of Directors of the Boone Area Chamber of Commerce. The memorandum expressed hope that by working collectively, the four stakeholders could serve as a catalyst for action.

The rationale, as expressed in that memorandum, was:

Although the current thoroughfare planning effort with the NCDOT appears to be at a standstill, our resident population and tourist presence in the area are both projected to continue increasing at high rates of growth.

This growth will put increasing pressure on our existing transportation infrastructure unless some major improvements are made over the next 10 to 20 years.

The need to empower this task force is magnified by the realization that none of the proposed alternatives currently under study by NCDOT for the routing of the Boone bypass (U-2703) is acceptable to a sufficiently broad segment of the citizens of Watauga County. We believe there is general agreement that all of the route designs offered by NCDOT suffer from their failure to properly account for local and neighborhood concerns and issues relating to the environmental impact.

It is an undeniable fact that increasing traffic volume presents a growing problem in the Boone area. We believe the Transportation Task Force provides an avenue for reaching consensus for a route location that will be in the best interest of our community and serve future generations of citizens. If the community fails to take a long-range view of our transportation needs, we face an extremely congested traffic situation 10 to 20 years from now.

*During February of 2000, each of the entities approved this request.*

#### **Task Force Organization:**

The inaugural meeting of the Transportation Task Force was March 8, 2000. At that meeting, the Task Force adopted Operating Procedures & Administrative Guidelines and established its mission to:

**“Recommend a route location for U-2703 that is in the best interest of our community.”**

Procedurally, the Transportation Task Force was to function independent of any of the core partners, but would remain accountable to those entities. It acknowledged that although the transportation needs of the area are multi-faceted, it would focus exclusively on the Boone Beltway project.

Also, the Transportation Task Force would endeavor to complete its study and issue its recommendation(s) to the core partners within a six-month time frame.

The group agreed to expand its membership to include three additional voting members, representing the community at-large.

Elected officers of the Task Force are: Mike Hall, chair; and Dempsey Wilcox, vice chair.

### **Scope of Project:**

In convening the Task Force, Mike Hall defined the scope of the project – to look at the long-range transportation issues. He said the Task Force must restrict its focus to the Beltway.

He acknowledged that transportation improvements and enhancements to surface streets within the Town of Boone and Watauga County are crucial to reducing local traffic congestion. Ideas and comments of short-range nature that are relative to the movement of traffic within the area will be referred to the Town of Boone, Watauga County and the Boone Area Chamber's Transportation Committee.

*"We truly need both short-range and long-range solutions. Upgrading thoroughfares in town was needed yesterday," Mike Hall said. "Even though that will give us some immediate reprieve, unless we start now planning on something that will give us some relief 20 years down the road, our successors will be wishing somebody had the foresight to at least reserve some corridor space so there will be the possibility of the road."*

*"Our mission here is so long-term in nature that we have to get past what our current issues are, and focus on what is going to exist here 20 years from now."*

### **Process:**

The Task Force agreed to review with an open mind all documentation supplied by NCDOT relative to the project, including data, charts and maps.

Members wanted to build a level of understanding about the underlying assumptions and rationale, maintaining objectivity. It was important that the Task Force undertake its research with a blank-slate approach.

NCDOT representatives were continually available to serve as resource experts and were responsive to the needs of the members.

All Task Force members had an opportunity to make suggestions and comment on issues



that came before the Task Force.

On two occasions, members were invited to physically tour the corridors that were under consideration.

The Task Force presented its preliminary findings to the general public for the purpose of receiving feedback from the citizens of Watauga County. This Community Meeting was held October 3, 2001.

The Task Force appreciated the support from Watauganet.com to make the preliminary findings available on the web site and encourage community forum input via the Internet.

This community feedback/input was essential to assist the Task Force in preparing its final recommendation.

The Task Force agreed to present its final recommendations to the governing boards of the core partners, asking for their support and endorsement. Although the work of the Task Force will be completed at this point, the Task Force stands ready to offer its continued assistance, if desired.

While the Task Force has maintained its long-range focus, much information has been gathered relating to the short-term needs of the area and transportation improvements that could be incorporated into the Thoroughfare Plans and addressed in NCDOT's TIP document.

Suggestions that were offered during the deliberations of the Task Force will be made available to the Town of Boone, Watauga County and the Boone Area Chamber's Transportation Development Committee. It is our hope that many of these suggestions will be embraced and advocated by the core partners.

The Task Force agreed at its December 8, 2000, meeting, to refer to the Chamber's Transportation Development Committee for further study all information pertaining to "short-term transportation improvements" and "alternative transportation options." Additionally, the Task Force asked the Chamber's University Relations Committee to consider those suggestions and comments that are related to "Appalachian State University policies and procedures covering student vehicles."

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US 421 Improvements / Daniel Boone Parkway  
Boone, Watauga County

T.I.P. Project Number U-2703

“Summary of Citizens Comments and Concerns”

from

Citizens Informational Workshop  
Broyhill Inn and Conference Center  
Appalachian State University

North Carolina Department of Transportation  
Transportation Planning Branch



FINAL September 26, 2004

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US 421 Improvements / Daniel Boone Parkway  
Boone, Watauga County

T.I.P. Project Number U-2703

Summary of Citizens Comments and Concerns

Citizens Informational Workshop  
Broyhill Inn and Conference Center  
Appalachian State University  
March 11, 2004



**URS**

PRODUCED BY:

URS INC. - NORTH CAROLINA  
1600 PERIMETER PARK DRIVE  
SUITE 100  
MORRISVILLE, NORTH CAROLINA 27560  
919.461.1100

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## SUMMARY

A Public Officials Meeting and Citizens Informational Workshop were held on March 11, 2004 at the Broyhill Inn and Conference Center on the campus of Appalachian State University in Boone, North Carolina. The Public Officials Meeting began at 1:00 P.M. – 2:00 P.M. and the Citizens Informational Workshop began at 3:00 P.M. The meetings were sponsored by the North Carolina Department of Transportation (NCDOT); Transportation Planning Branch and the Office of the Human Environment.

The purpose of the workshop was to review the project history and obtain comments and concerns on the proposed US 421 Improvements / Daniel Boone Parkway project [Transportation Improvement Number (T.I.P.) U-2703] from NC 105 Bypass extending east to SR 1514 (Bamboo Road). NCDOT sought this information to determine the goals that local citizens have for the proposed project. This input will be considered by the Project Study Team, which includes representatives from federal, state, and local agencies for transportation and environmental planning. The Project Team will use the input from the workshop and other data about benefits and impacts to narrow the list of proposed Corridor Alternatives. This report was produced to document the results of the public involvement efforts.

The Public Officials Meeting and Citizens Informational Workshop were advertised to the public in several manners. First a news release composed by the Office of the Human Environment was released to the following news outlets:

### Radio Stations

WATA/WZJS- FM-Boone  
WXIT/WECR-Boone  
WKBC-North Wilkesboro  
WWWC-Wilkesboro  
WJRI-Lenoir  
WKGX-Lenoir  
WKVS-FM-Lenoir  
WYCV-Granite Falls

### Newspapers

The Blowing Rock-Blowing Rock  
The Mountain Times-Boone  
The Watauga Democrat-Boone  
The Journal Patriot-North Wilkesboro  
The Winston-Salem Journal-NW Bureau-Wilkesboro  
The Lenoir News-Lenoir

### Television Stations

Mountain Television Network-Boone

Direct flyers announcing the workshop were faxed to local schools, churches, medical facilities and utility companies for public posting. In addition, the NCDOT Division 11 office composed a letter to local public officials notifying them of the upcoming meeting.

Approximately 15 people attended the Public Officials Meeting beginning at 1:00 P.M. Representatives from Watauga County, the Town of Boone, and others were present to review the progress on the project to date and offer their comments or ask questions.

Approximately 150 people attended the Citizens Informational Workshop beginning at 3:00 P.M. The format of the workshop follows:

- **Sign-In Table** - citizens were greeted, given copies of the workshop handout, and directed to the first station.
- **Station 1** – 15 minute, self-running Power Point presentation introducing the proposed project and the goals for the evening, providing history of the project, and directing citizens to the next station.
- **Station 2** – Need and Purpose Station where citizens reviewed existing and projected traffic data.
- **Station 3** – Alternatives/Design Options Station where citizens could review design options including Context Sensitive Designs, explanations of corridor / right-of-way limits, and what a typical section for the proposed roadway could look like.
- **Station 4** – Benefits & Impacts / Planning Process Station displaying potential impacts of each corridor alternative, aerial mapping highlighting concerns in the overall study area (wetlands, community facilities, cultural resources, streams, etc.), and a flow chart of the planning process.
- **Station 5** – Comment Station where local citizens could post sticky notes of individual goals and review those posted by their neighbors, receive clarification of any issues from previous stations, and complete comment sheets.
- **Kids Table** – An area was provided where children could color and play games while their parents reviewed data at the workshop.

Comments from the workshop were received in several ways. First a comment sheet was provided to citizens when they entered the workshop, they had the option of completing it when they were finished reviewing the display stations or taking it home and completing it at a later date. Second, a “Post-It Board” exercise was held the night of the workshop. Citizens were given a set of four (4) sticky notes and asked to write their goals for the proposed project directly on the sticky notes and post them on a board provided in order of 1<sup>st</sup> most important through 4<sup>th</sup> most important. Comments were received for a period of approximately 10 weeks following the workshop.

The results of all comments received through these exercises were summarized and tallied in a spreadsheet. The majority of comments received were of two (2) natures – 1) either for or against a specific alignment presented or 2) addressing a specific concern.

Corridor Alternatives 3 and 6 were the alternatives that received the most overall interest. The Corridor Alternatives favored most by local citizens were 3 and 6 and the Corridor Alternatives least favored by local citizens were 6, 5 and 3.

In general, approximately 260 comments were received addressing a specific concern. The most common concern was categorized as “Other Traffic Solutions” which included look at no-sprawl alternatives; make King Street and Howard Street or River Street one-way; stay on existing corridors; and offer more transit solutions. The next common concerns were “Effects on Land Use and Community Character” and “Environmental Concerns”. Citizens expressed support of maintaining the local character of their neighborhoods and community cohesion and protecting important local resources such as water quality and scenic vistas.



In conclusion, this report documents the Public Officials Meeting and Citizens Informational Workshop held on March 11, 2004 for the proposed US 421 Improvements / Daniel Boone Bypass in Boone, Watauga County, North Carolina. This report will be used by the Project Team to understand local citizens concerns and goals for their community. The Team will consider all comments while selecting the Corridor Alternatives to advance to the next level of study.

Any questions concerning this project or public involvement effort should be directed to:

Ms. Alena Cook, P.E., Project Manager  
Transportation Planning Branch  
North Carolina Department of Transportation  
1554 Mail Service Center  
Raleigh, NC 27699-1554  
919.733-4705 ext. 31  
[arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us)

### Attachments to the Report

1. Copy of the project notices.
2. Copy of the workshop handout including comment sheet.
3. Copy of the workshop layout.
4. Spreadsheet tallying/summarizing all comments received.

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# **PROJECT NOTICES**

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

**Release: Immediate**  
**Contact: Jane Martin, [jtmartin@dot.state.nc.us](mailto:jtmartin@dot.state.nc.us)**  
**Release No: 093**

**Date: Feb. 26, 2004**  
**Distribution: 95**

**NCDOT to Hold Workshop on Proposed U.S. 421  
Improvements/Daniel Boone Parkway in Boone**

**Raleigh** --- The N.C. Department of Transportation (NCDOT) will hold a citizens informational workshop on Thursday, March 11, 2004, on proposed improvements to the U.S. 421 corridor in Boone in Watauga County.

The workshop will be held from 3 to 8 p.m. in the ballroom and conference room at the Broyhill Inn and Conference Center, Appalachian State University, Boone.

NCDOT is studying proposed improvements along a 5.3-mile stretch of U.S. 421 (King Street) in Boone from the N.C. 105 Bypass to east of State Road 1514 (Bamboo Road). The purpose of this project is to relieve congestion and improve safety along with enhancing linkages to U.S. 321, U.S. 221 and N.C. 105. The alternatives being studied include improving the existing roadway (King Street) as well as building on a new location, the Daniel Boone Parkway. The new location alternatives are to the north and south of the existing highway with lengths ranging from five to 13 miles. Maps depicting the alternatives will be available for review and comment at the workshop.

Representatives from NCDOT will be available to provide information, answer questions and accept written comments from the public about the proposed project.

For more information, contact Phillip Trew with the High Country Rural Planning Organization, P.O. Box 1820, Boone, N.C. 28607 or by phone at (828) 265-5434. At NCDOT, contact Alena Cook at (919) 733-4795, via email at [arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us), by fax at (919) 733-2417 or write to and reference TIP project number U-2703:

ALENA COOK, NCDOT  
TRANSPORTATION PLANNING BRANCH  
1554 MAIL SERVICE CENTER  
RALEIGH, N.C. 27699-1554

**-MORE-**

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this workshop. Anyone requiring special services should contact Alena Cook at the above address, phone number or fax as early as possible so that arrangements can be made.

**\*\*\*NCDOT\*\*\***

**For other transportation questions, call the department's Customer Service Office toll free at:**

**1-877-DOT-4YOU**

U-2703

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATIONMICHAEL F. EASLEY  
GOVERNORLYNDO TIPPETT  
SECRETARY

February 24, 2004

CITIZENS PARTICIPATION  
RECEIVED

MAR 09 2004

## MEMORANDUM

TO: Secretary Lyndo Tippet

FROM: Carl B. Goode, Jr., P. E. *CBG/slj*  
Manager  
Office of Human Environment

RE: Improvements to U.S. 421 (King Street) Corridor/Daniel Boone Parkway in  
Watauga County in the vicinity of Boone.

The following notice is furnished for your information:

U-2703

CBGjr/slj

Attachment

cc: Mr. Samuel L. Erby, Member, Board of Transportation, Division 11  
Mr. Roger Sheats  
Mr. Len Sanderson, P. E.  
Mr. Steve Varnedoe, P. E.  
Mr. J. B. Williamson, Jr.  
Ms. Deborah M. Barbour, P. E.  
Mr. C. W. Leggett, P. E.  
Mr. Omar Sultan, P. E.  
Mr. Greg Thorpe  
Mr. Art McMillan, P. E.  
Mr. Jay Bennett, P. E.  
Mr. J. Victor Barbour, P. E.  
Mr. T. A. Peoples, P. E.  
Mr. Robert Mathes  
Ms. Tammy Denning  
Mr. Everett Ward  
Mr. Mike Bruff, P. E.  
Mr. Drew Joyner, P. E.  
Mr. Jimmy Caudle, Right of Way Agent-Division 11  
FHWA

**NOTICE OF A CITIZENS INFORMATIONAL WORKSHOP  
FOR PROPOSED IMPROVEMENTS TO U.S. 421 (KING STREET)  
CORRIDOR/DANIEL BOONE PARKWAY IN WATAUGA COUNTY IN THE  
VICINITY OF BOONE**

WBS No.35629.1.1

U-2703

Watauga County

The North Carolina Department of Transportation (NCDOT) will hold the above Citizens Informational Workshop on Thursday, March 11, 2004 between the hours of 3:00 p.m. and 8:00 p.m. in the Ballroom and Conference Room of the Broyhill Inn and Conference Center at Appalachian State University, Boone.

The purpose of this workshop is for NCDOT representatives to provide information, answer questions, and accept written comments regarding this project. NCDOT proposes improvements to relieve congestion and improve safety on U.S. 421 (King Street) and to enhance linkage to U.S. 321, U.S. 221, and N.C. 105. The alternatives include improving the existing facility or constructing a new road on a new location (Daniel Boone Parkway).

Anyone desiring additional information may contact Ed Lewis, NCDOT, 1583 Mail Service Center, Raleigh, NC 27699-1548, by phone at (919) 715-1593 or Phillip Trew, High Country Rural Planning Organization, P.O. Box 1820, Boone, NC 28607, by phone at (828) 265-5434.

NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in this workshop, to comply with the Americans with Disabilities Act. To request special assistance, please contact Mr. Lewis as early as possible so that arrangements can be made.



**WORKSHOP HANDOUT  
COMMENT FORM**

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# CITIZENS INFORMATIONAL WORKSHOP

## US 421 IMPROVEMENTS/ DANIEL BOONE PARKWAY

From NC 105 Bypass Extending East to SR 1514 (Bamboo Road)  
Boone, Watauga County, North Carolina

TIP Project U-2703

March 11, 2004



### What is the Proposed Project?

The North Carolina Department of Transportation (NCDOT) proposes to improve an approximate 4.5-mile segment of US 421 (King Street) through downtown Boone in Watauga County. This section begins at NC 105 Bypass extends eastward through downtown Boone and ends at the relocation of US 421 (TIP Project No. R-529). This project will connect to the relocated portion of US 421 east of Boone.

Proposed Corridor Alternatives include:

- improvements to the existing location of US 421 (King Street);
- rerouting US 421 to a new location north of King Street beginning at NC 105 Bypass and ending at SR 1514 (Bamboo Road); and
- rerouting US 421 to a new location south of King Street beginning at NC 105 Bypass and ending at SR 1514 (Bamboo Road).

For a map of the proposed locations, please see the figure entitled, "Corridor Alternatives."

US 421 is still in the preliminary design phase, but the proposed alternatives are designed as four lane, median-divided roadways. The relocated US 421 is proposed to have full control of access, meaning there will not be any at-grade intersections or driveway openings allowed directly to the new facility. There will be interchanges with major existing roads such as NC 105, US 221, US 321, and NC 194.

### Need for and Purpose of the Proposed Project

US 421 in the vicinity of the Town of Boone is routed along King Street, the primary downtown corridor. This portion of US 421 (King Street) is currently experiencing congestion that will continue to worsen in the future. This congestion is due to the mixture of local traffic along King Street with destinations in downtown Boone and through-traffic using US 421, US 321/221, and NC 105.

The mobility and safety problems that exist along US 421 (King Street) can be improved if the through traffic using the roadway is separated from the local traffic. The improvements should:

- Reduce the mixed traffic use of US 421 (King Street) through downtown Boone;
- Improve highway system linkages by providing a more direct connection between US 421 and US 321/221 to the south and NC 105 to the west;
- Improve traffic flow along US 421 and the other major transportation routes in the area; and
- Improve overall safety along US 421 (King Street) and the other major roadways in the area.

## How the Proposed Project has been Studied to Date...

Proposals to reroute US 421 to a roadway on a new location have been included in local long-range transportation plans since the 1970s.

- 1995 The Town of Boone requests that NCDOT further study the proposal to reroute US 421.
- 1997 NCDOT conducts a preliminary environmental review and holds a Public Information Workshop.
- 1999 A Transportation Task Force is formed to study transportation issues in the area.
- 2001 The task force presents its final recommendations, which include a concept for the type of roadway preferred, an additional alternative (Corridor #6), and the naming of the new highway as the "Daniel Boone Parkway."
- 2002 In response to a request from the Town of Boone, NCDOT begins a detailed study of all alternatives suggested to date. As part of the detailed study, the following information has been developed for all alternatives; preliminary designs, construction and right-of-way cost estimates, information on traffic, and potential impacts to the built and natural environments.
- 2004 A Citizens Informational Workshop is held March 11, 2004.

## What Happens Next?

NCDOT is seeking your input at this Citizens Informational Workshop to determine the goals that local citizens have for the proposed project. This input will be considered by the Project Study Team, which includes representatives from federal, state, and local agencies for transportation and environmental planning. The Project Team will use the input from tonight's workshop and information about benefits and impacts to narrow the list of proposed Corridor Alternatives. A report documenting the results of this study will be developed, and a second Citizens' Informational Workshop will be held in late 2004 to discuss the remaining alternatives.

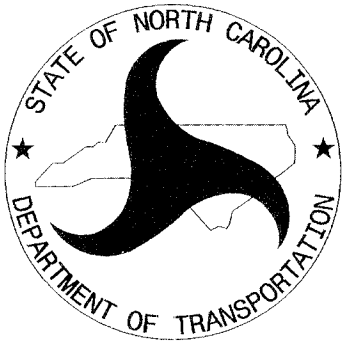
After the conclusion of this study, the Town of Boone and/or Watauga County may decide to revise their long-range transportation plans to include the "locally preferred alternative." The decision then becomes whether to include the proposed project in the Transportation Improvement Program (TIP) for funding. The date for this decision by the State Transportation Board is not known. Once the project is funded under the TIP, additional studies will be completed in order to select the final location of the highway. Additional opportunities for citizen input will be included throughout the process.

## CONTACT INFORMATION

Ms. Alena R. Cook, P.E.  
North Carolina Department of Transportation  
Statewide Planning Branch  
1554 Mail Service Center  
Raleigh, NC 27699-1554  
[arcook@dot.state.nc.us](mailto:arcook@dot.state.nc.us)



**1-877-DOT-4YOU**



# US 421 Improvements / Daniel Boone Parkway Citizens Informational Workshop COMMENT SHEET

TIP No. U-2703

MARCH 11, 2004

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**PLEASE PRINT:**

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/TOWN: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

1. If you could identify **one** feature that you would like for NCDOT to consider while planning the proposed project, what would this be? (For example, endangered species, not disrupting existing neighborhoods, water quality protection, access to local facilities, noise, etc.)

\_\_\_\_\_

2. Why do you think preserving the feature listed in **Question 1** is important to the local community?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I also wish to comment or inquire about the following aspects of this project:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Concerning the format of the Citizens Informational Workshop, do you have any positive or negative comments, or suggestions for improvements to the way information was presented to the public?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# US 421 Improvements / Daniel Boone Parkway Citizens Informational Workshop COMMENT SHEET

T.I.P. No. U-2703

March 11, 2004

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All suggestions, questions, or comments may be submitted in writing by completing this form and leaving it at this public meeting. You may also mail or call in your comments/questions to the address and phone number provided below.

Ms. Alena R. Cook, P.E.  
Statewide Planning Branch  
North Carolina Department of Transportation  
1554 Mail Service Center  
Raleigh, North Carolina 27699-1554

**1-877-DOT-4YOU**  
Toll-Free  
Monday through Friday  
8:00 AM to 5:00 PM

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(Fold Here to Mail)

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Ms. Alena R. Cook, P.E.  
Statewide Planning Branch  
North Carolina Department of Transportation  
1554 Mail Service Center  
Raleigh, North Carolina 27699-1554

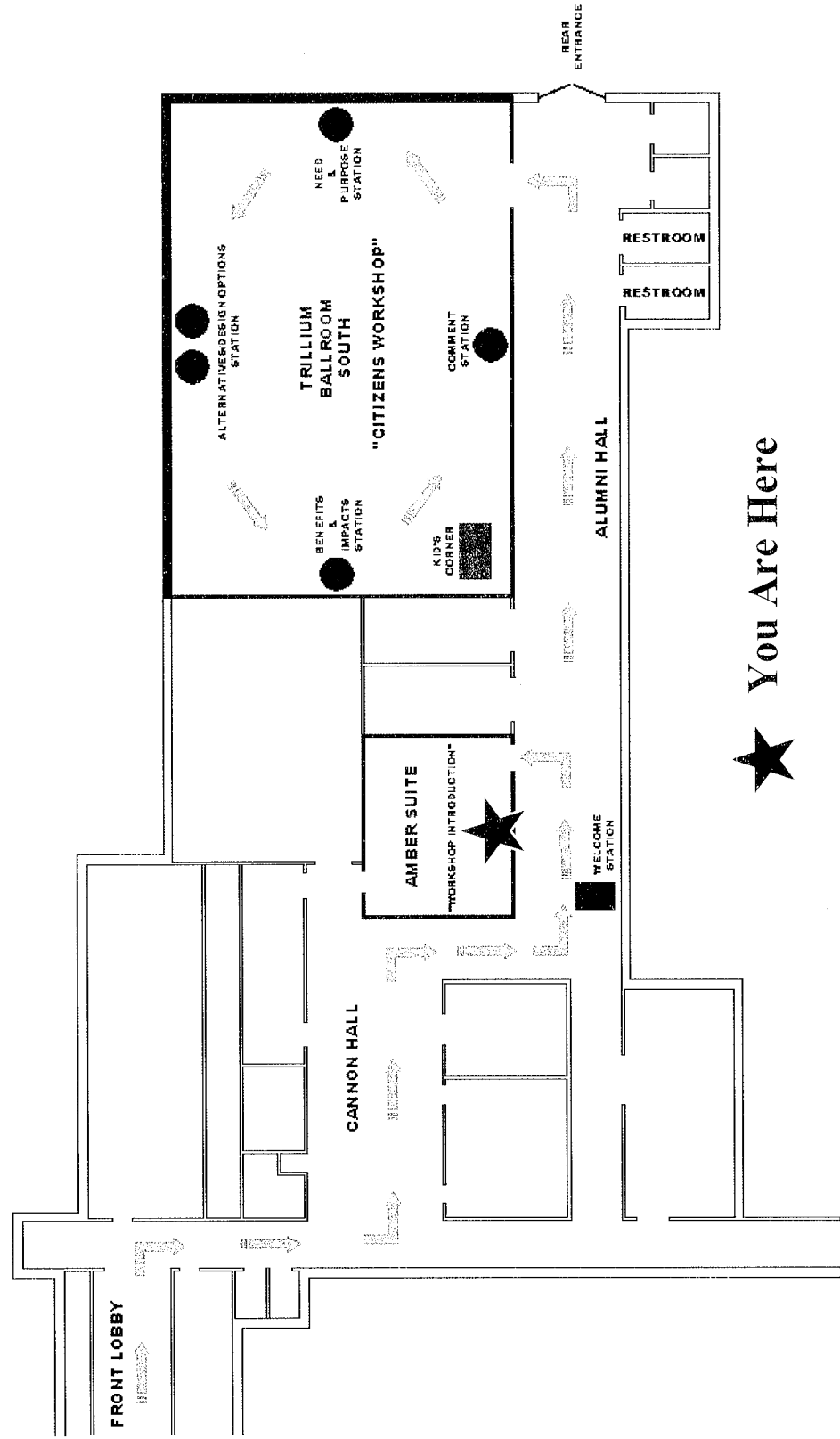
# **WORKSHOP LAYOUT**

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# Workshop Layout

## Broyhill Inn and Conference Center











★ You Are Here



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## **COMMENT SUMMARY**

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Summary of Concerns	Total Responses	% of Overall Comments*	Tally
Least Favorite Alternative			
Alternative 1 (3), Alternative 2 (6), Alternative 3 (10), Alternative 5 (12), Alternative 6 (25), Alternative 7 (3), Alternative 8 (4), Alternative 1A (3), Alternative 2A (7), Alternative 6A (4), Alternative 1B (3), Alternative 2B (8), Alternative 1N (1), Alternative 2N (1)			
Favorite Alternative			
Alternative 1 (1), Alternative 2 (5), Alternative 3 (12), Alternative 5 (4), Alternative 6 (12), Alternative 7 (6), Alternative 8 (4), Alternative 1A (3), Alternative 2A (6), Alternative 6A (1), Alternative 1B (1), Alternative 2B (1), Alternative 1N (1), Alternative 5N (4)			
1. Traffic Solutions	55	21.24%	
2. Relieve Existing Traffic	28	10.81%	
3. Appalachian State University	25	9.65%	
4. Effects on Land Use and Community Character	49	18.92%	
5. Environmental Concerns	50	19.31%	
6. Planning/Schedule	37	14.29%	
7. Financial Considerations	10	3.86%	
8. Safety	5	1.93%	
	259	100%	

**"First Priority Goals"****Least Favorite Alternative**

The contents of this concern included: Against a Potential Alignment Resembling Alternative 1 (1), Alternative 2 (3), Alternative 3 (3), Alternative 5 (3), Alternative 6 (9), Alternative 8 (1), Alternative 1A (1), Alternative 2A (3), Alternative 6A (2), Alternative 2B (1)

**Favorite Alternative**

The contents of this concern included: In Favor of a Potential Alignment Resembling Alternative 2 (1), Alternative 3 (4), Alternative 5 (1), Alternative 6 (5), Alternative 7 (4), Alternative 8 (3), Alternative 1A (3), Alternative 2A (1), Alternative 6A (1), Alternative 5N (2)

**Traffic Solutions**

14

The contents of this concern included: Solutions Should be Planned to Address Problems in Town- Not Routing all Traffic Away from Town ("No Sprawl") (4), Stay on Existing Corridors (3), Need to Incorporate Bike Lanes into Design (1), Combine Alternatives 3 and 6 with 321/221 for a New Alternative (2), Connect 421 and 321 away from Downtown (1), Move Interchange out of Boone's CBD (1), 5-Lane Hardin Street to Hwy 194 (1), Make King Street and Howard Street/River Street 1-Way (1)

**Relieve Existing Traffic**

12

The contents of this concern included: Relieve long-Term Congestion in Downtown Boone (6), Relieve Downtown Rush-Hour Traffic (2), Relieve 321/105 Traffic (1), Relieve 105 Bypass (west) Traffic (1), Relieve Traffic in and Around Boone (1), Eliminate Cut-Through Traffic in Neighborhoods (1)

**Appalachian State University**

11

The contents of this concern included: ASU Students are Major Cause of Traffic Congestion in Downtown Boone (3), None of the Solutions Presented will Solve Problems with ASU Students (1), Make Students Leave Personal Cars at Home (5), Solve Traffic Problems Associated with ASU First (1), ASU is Pushing for Growth that Local Infrastructure will not Support (1)

**Effects on Land Use and Community Character**

10

The contents of this concern included: Protect Natural Beauty of Local Area (2), Protect Scenic Character of Downtown Boone (3), Avoid Local Neighborhood Impacts (3), Maintain Connectivity of Local Road Network (1), Protect Greenways (1)

**Environmental Concerns**

9

The contents of this concern included: Protect Local Waterways and Water Supplies (5), Preserve and Protect Our Environment (4)

**Planning/Schedule**

8

The contents of this concern included: Expedite Project Schedule (3), Think Long-Term with Planning (1), There is No Need for This Project (1), Lack of NCDOT Empathy Towards Citizens (2), Task Force Does Not Represent our Community (1)

**Financial Considerations**

1

The contents of this concern included: Minimize Costs to Build Improvements (1)

**Safety**

0

The contents of this concern included: -

**TOTAL NUMBER OF COMMENTS 65**

Note: The information below each bar category represents the specific identified concerns. The number of specified concerns varied from the number of overall comment sheets as some citizens listed more than one concern on their "sticky note" response.

**"Second Priority Goals"**

Least Favorite Alternative
The contents of this concern included: Against a Potential Alignment Resembling Alternative 2 (1), Alternative 3 (2), Alternative 5 (2), Alternative 6 (4), Alternative 2A (1), Alternative 2B (1), Alternative 6A (1)
Favorite Alternative
The contents of this concern included: In Favor of a Potential Alignment Resembling Alternative 3 (2), Alternative 5 (1), Alternative 6 (1), Alternative 7 (1)

## Traffic Solutions

8

The contents of this concern included: Stay on Existing Corridors (2), Have Landscaped Medians (1), Not on Jordan V. Cook Road (2), More Transit Solutions (2), Traffic Benefits Should be High (1)

## Relieve Existing Traffic

4

The contents of this concern included: Relieve long-Term Congestion in Downtown Boone (1), Remove Trucks from Downtown Boone (1), Reduce Through-Traffic (2)

## Appalachian State University

5

The contents of this concern included: ASU Students are Major Cause of Traffic Congestion in Downtown Boone (1), Make Students Leave Personal Cars at Home or Limit Driving (4)

## Effects on Land Use and Community Character

10

The contents of this concern included: Protect Scenic Character of Downtown Boone (2), Minimize Noise and Visibility of New Road (2), Avoid Local Neighborhood Impacts (3), Alternative Must Look Nice and Blend into Environment (1), Protect Our Greenway (2)

## Environmental Concerns

14

The contents of this concern included: Protect Local Waterways and Water Supplies (9), Protect Our Environment (4), Protect Historic Properties (1)

## Planning/Schedule

5

The contents of this concern included: Expedite Project Schedule (2), Please Think Long-Term with Planning (1), There is No Need for this Project (1), Boone is a Destination for Tourists (1)

## Financial Considerations

2

The contents of this concern included: Push for Trust Funding (1), Careful Analysis of Benefits and Costs (1)

## Safety

0

The contents of this concern included:

**TOTAL NUMBER OF COMMENTS 48**

Note: The information below each bar category represents the specific identified concerns. The number of specified concerns varied from the number of overall comment sheets as some citizens listed more than one concern on their "sticky note" response.

**"Third Priority Goals"**

<b>Least Favorite Alternative</b>
The contents of this concern included: Against a Potential Alignment Resembling Alternative 3 (1), Alternative 5 (2), Alternative 6 (4), Alternative 2B (1)
<b>Favorite Alternative</b>
The contents of this concern included: In Favor of a Potential Alignment Resembling Alternative 6 (2), Alternative 8 (1)

**Traffic Solutions**

9

The contents of this concern included: Stay on Existing Corridors (2), Avoid In-Town Alternatives (1), Include Design Options Discussed at Workshop (TODS, noise walls, etc.) (1), Landscaped Medians (1), Widen Deerfield Road and Wilson Ridge as an Eastern Corridor (1), Make King Street and Howard or River Street One-Way (2), Investigate Mass Transit Options (1)

**Relieve Existing Traffic**

1

The contents of this concern included: Relieve long-Term Congestion in Downtown Boone (1)

**Appalachian State University**

4

The contents of this concern included: ASU Students are Major Cause of Traffic Congestion in Downtown Boone (1), None of the Solutions Presented will Solve Problems with ASU Students (1), Make Students Leave Personal Cars at Home (1), ASU is Pushing for Growth that Local Infrastructure Will Not Support (1)

**Effects on Land Use and Community Character**

8

The contents of this concern included: Protect Local Neighborhood Impacts (3), Minimize Relocations (1), Families First (2), Consider Long-Term Future of Boone and Watauga County (1), Keep Downtown Boone Tourist-Friendly (1)

**Environmental Concerns**

7

The contents of this concern included: Protect Local Waterways and Water Supplies (1), Preserve and Protect Our Environment (3), Lessen Air Pollution (1), Preserve Local Greenway (1), Maintain Trees Along Jordan V. Cook Road (1)

**Planning/Schedule**

5

The contents of this concern included: Expedite Project Schedule (1), There is No Need for this Project (4)

**Financial Considerations**

0

The contents of this concern included: -

**Safety**

2

The contents of this concern included: - Make Downtown Boone Safe for Pedestrians (2)

**TOTAL NUMBER OF COMMENTS 36**

Note: The information below each bar category represents the specific identified concerns. The number of specified concerns varied from the number of overall comment sheets as some citizens listed more than one concern on their "sticky note" response.



**"Fourth Priority Goals"****Least Favorite Alternative**

The contents of this concern included: Against a Potential Alignment Resembling Alternative 3 (2), Alternative 5 (1), Alternative 6 (3), Alternative 2B (1)

**Favorite Alternative**

The contents of this concern included: In Favor of a Potential Alignment Resembling Alternative 2 (1), Alternative 6 (1), Alternative 2A (1), Alternative 2B (1)

**Traffic Solutions**

14

The contents of this concern included: Route all Traffic Away from Downtown (2), Consider Spot Enhancements (2), Need Roadway that Blends into Local Setting (2), Build a Two-Lane Undivided Road/Bypass (1), Widen Existing Bamboo Road/Wilson Ridge/Deerfield Road (1), Consider Other Transit Options (Pedestrian, Bike and Bus Routes) (3), Connect 421 and 321 to Move Through Traffic (1), Create New Connectors between Existing Corridors (1), Consider an Alternative Further North of Option 7 (1)

**Relieve Existing Traffic**

4

The contents of this concern included: Relieve Long-Term Congestion in Downtown Boone (1), Remove Through Traffic from Downtown (2), Bypass will Relieve Traffic (1)

**Appalachian State University**

2

The contents of this concern included: ASU Students are Major Cause of Traffic Congestion in Downtown Boone (1), Work with ASU and Town to Develop Reasonable Commuting and Destination Traffic (1)

**Effects on Land Use and Community Character**

5

The contents of this concern included: Avoid Local Neighborhood Impacts (2), Preserve Community Character (1), Avoid Jordan V. Cook Road and Community (1), Concern over Community Golf Course (1)

**Environmental Concerns**

7

The contents of this concern included: Protect Local Waterways and Water Supplies (1), Preserve and Protect Our Environment (3), Avoid Winklers Creek (2), Low Environmental Impacts (1)

**Planning/Schedule**

5

The contents of this concern included: There is No Need for this Project or Do Not Build It (3), Be More Honest in Presentations (1), All Options are Sad to Consider (1)

**Financial Considerations**

5

The contents of this concern included: Funding Structure Needs to be Broken into Mini Projects (1), Putting Tax Money Into Widening Existing King Street Would be a Waste (1), Cost is Important (1), Improvements are Too Expensive (2)

**Safety**

0

The contents of this concern included:

**TOTAL NUMBER OF COMMENTS 42**

Notes: The information below each bar category represents the specific identified concerns. The number of specified concerns varied from the number of overall comment sheets as some citizens listed more than one concern in their "sticky note" response.

## Citizen Comment Forms

## Least Favorite Alternative

The contents of this concern included: Against a Potential Alignment Resembling Alternative 1 (2), Alternative 2 (2), Alternative 3 (2), Alternative 5 (4), Alternative 6 (5), Alternative 7 (3), Alternative 8 (3), Alternative 1A (2), Alternative 2A (3), Alternative 6A (1), Alternative 1B (3), Alternative 2B (4), Alternative 1N (1), Alternative 2N (1)

## Favorite Alternative

The contents of this concern included: In Favor of a Potential Alignment Resembling Alternative 1 (1), Alternative 2 (3), Alternative 3 (7), Alternative 5 (2), Alternative 6 (3), Alternative 7 (1), Alternative 2A (4), Alternative 1B (1), Alternative 1N (1), Alternative 5N (2)

## Traffic Solutions

10

The contents of this concern included: Solutions Should be Planned to Address Problems in Town- Not Routing all Traffic Away from Town ("No Sprawl") (1), Consider Spot Improvements to Existing Network (3), 5-Lane King Street (1), Route Further North of King Street (1), Connect 421 to 321 Towards Blowing Rock (1), Create One-Way Streets with King and River (2), Keep in Existing Road Corridor (1)

## Relieve Existing Traffic

7

The contents of this concern included: Relieve long-Term Congestion in Downtown Boone (5), Relieve Congestion around Watauga High School (1), "Relieve traffic at intersections 105 & 321, Winkler's Creek Road & 321, 105 & Wilson Road, with access to US 421 Improvements from Deckhill Road, Winkler's Creek Road, Russ Comeet and Poplar Grove Road" (1)

## Appalachian State University

3

The contents of this concern included: ASU Students are Major Cause of Traffic Congestion in Downtown Boone (2), None of the Solutions Presented will Solve Problems with ASU Students (1)

## Effects on Land Use and Community Character

16

The contents of this concern included: Protect Natural Beauty of Local Area (3), Protect Scenic Character of Downtown Boone (1), Avoid Local Neighborhood Impacts (7), Protect Greenway (2), Preserve Local Heritage (1), Protect Blairmont Subdivision (1), Minimize Impacts to Existing Structures Downtown (1)

## Environmental Concerns

13

The contents of this concern included: Protect Local Waterways and Water Supplies (7), Preserve and Protect Our Environment (2), Minimize Noise Impacts (3), Minimize Pollution (1)

## Planning/Schedule

14

The contents of this concern included: Expedite Project Schedule (3), Think Long-Term with Planning (1), There is No Need for This Project (3), Concerned about Right of Way Process (2), Boone is Destination for Tourists (5)

## Financial Considerations

2

The contents of this concern included: Too Small Benefits for Such Large Cost (2)

## Safety

3

The contents of this concern included: - Improve Downtown Safety (2), Improve Access to Watauga Hospital (1)

**TOTAL NUMBER OF COMMENTS 68**

Note: The information below each bar category represents the specific identified concerns. The number of specified concerns varied from the number of overall comment sheets as some citizens listed more than one concern in their response.

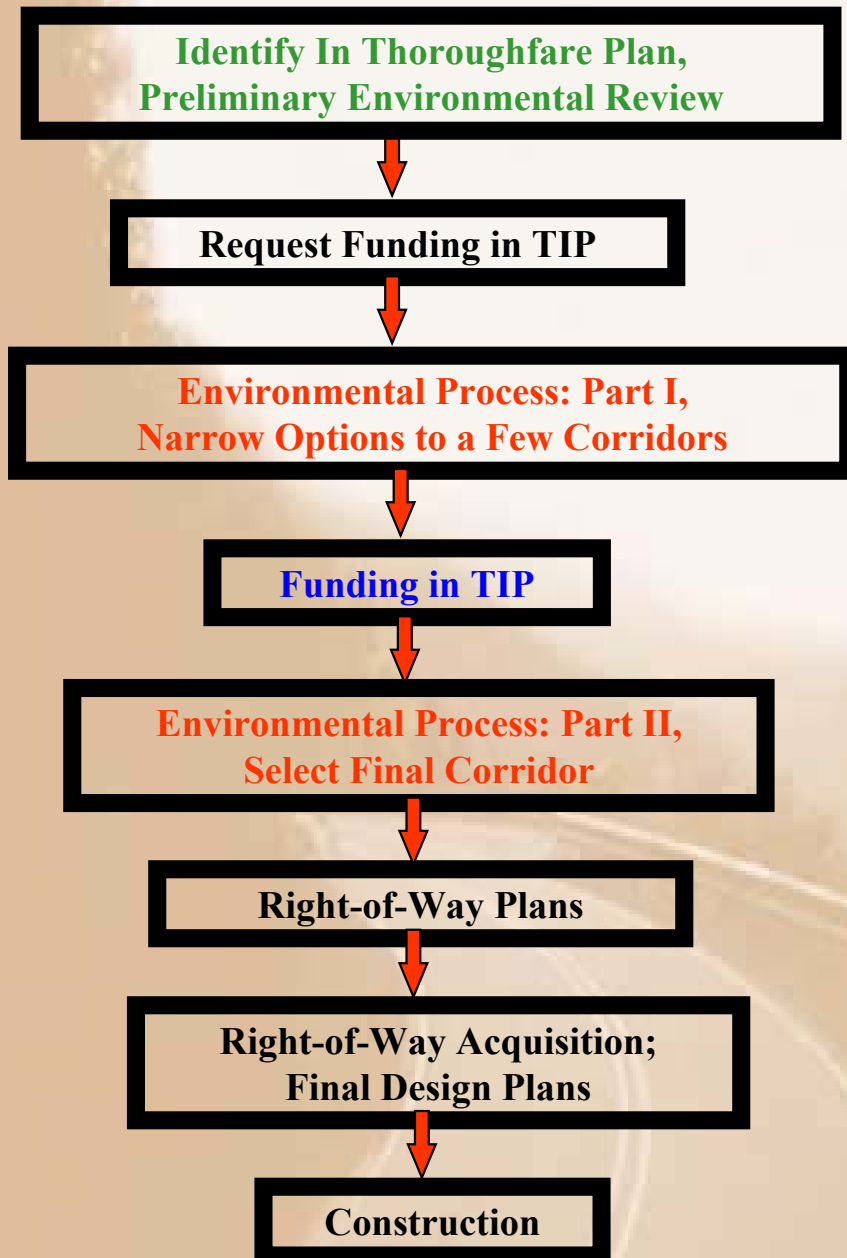
## **- STATION ONE -**


### **“WORKSHOP INTRODUCTION”**

**This will be an approximate 15-minute video presentation.**



# DEVELOPMENT PROCESS FOR A ROADWAY





# US 421 Improvements/ Daniel Boone Parkway Citizens Informational Workshop

From US 421 West of Boone to the  
Relocated US 421 East of Boone

Watauga County

*Transportation Improvement Program*

*Project U-2703*



# WELCOME!

We are holding this Citizens  
Informational Workshop to gain a better  
understanding of what citizens are  
looking for from the proposed project.

This will help the Project Team to  
narrow the number of future study  
alternatives.





## This presentation will cover...

- What happens tonight?
- What project is being studied?
- Where are we in the study process?



## What is being studied?

How to add capacity to US 421 by modifying existing King Street or by rerouting US 421 to a new road away from downtown.

The objective of this study is to narrow the number of future study alternatives by considering...

- The Need and Purpose for the Project
- Community Goals and Objectives
- Traffic Benefits
- Cost Estimates
- Impacts to the Natural and Built Environments



# Where are we in the study process?

- Identify in Thoroughfare Plan, Preliminary Environmental Review
- Request Funding in Transportation Improvement Program (TIP)
- Environmental Process: Part 1, Narrow Options to a Few Corridors
- Funding in TIP
- Environmental Process: Part 2, Select Final Corridor
- Right-of-Way Plans
- Right-of-Way Acquisition; Final Design Plans
- Construction



# What happens tonight?

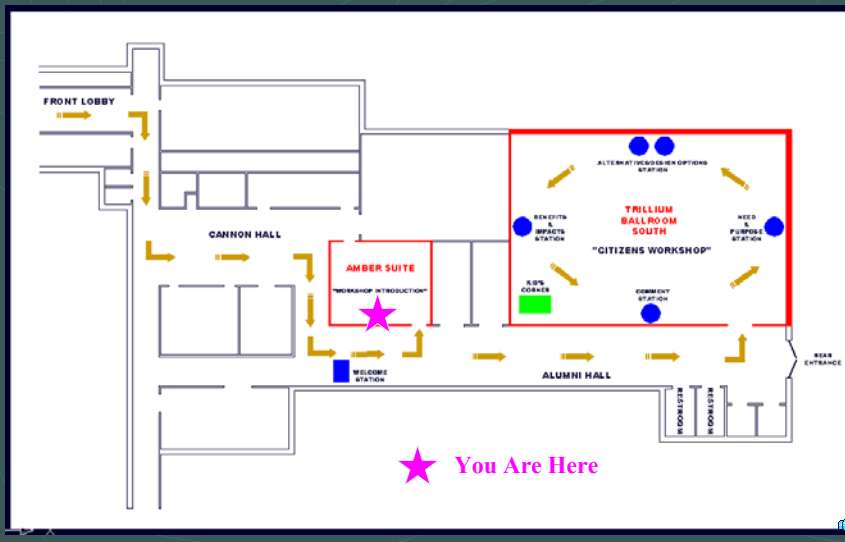


## Workshop Activities...

- Slideshow Presentation
- Handout
- Informational Display Stations with Project Team Staff Available for Questions
- Comment Station



## Workshop Layout Broyhill Inn and Conference Center







## Display Stations



- Stations were developed to provide citizens with general information on the planning process and the proposed project.
- Each station is manned by experienced staff who can provide explanations and answer questions.
- At the end of the tour is a comment station where written input can be submitted for consideration during the planning process. Citizens also have the option of voice recording comments, please let staff know if you would like to use this option tonight.



## Community Feedback...

Tonight we would like each of you to identify the four GOALS you want most from the proposed project.

Your comments will be used to help narrow the number of study alternatives.



Examples of these goals could be  
but are not limited to...



## Transportation Goals:

- Less congestion during commute times;
- Shorter drive time to school;
- Fewer delays during tourist peaks; and
- Less truck traffic in downtown Boone.



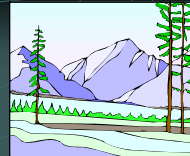
## Community Goals:

- Safer road facility;
- Lessen cut-through traffic in neighborhoods;
- Reduce travel times for emergency vehicles; and
- Eliminate noise and air impacts caused by truck traffic in downtown Boone.



## Environmental Goals:

- Reduce vehicle emissions due to congestion delays;
- Keep open spaces near downtown;
- Protect natural beauty of area; and
- Protect surface water resources.



## Other Goals:

- Maintain vibrancy of downtown businesses;
- Guide the direction of future development;
- Preserve and enhance the community character of Boone;
- Remove cut-through traffic from as many local roads as possible; and
- Facilitate travel to and from community events.



## Community Feedback Sticky Note Exercise



Write your goals on the sticky notes provided ranking them in order of importance from number 1 through number 4.

1<sup>st</sup> Most  
Important  
Goal



4<sup>th</sup> Most  
Important  
Goal



Leave Comment Sheets in Marked  
Drop Boxes



Or Drop Them in the Mail !





# What project is being studied?



## Project Description

- Add capacity to US 421 by modifying existing King Street or by rerouting US 421 to a new road away from downtown.
- US 421 is designated as part of the North Carolina Intrastate System and is classified as a Principal Arterial.
- US 421 is intended to provide a high level of mobility for long, uninterrupted travel.



## Why is the Project Needed?

- Reduce traffic congestion on King Street and other roads in the area.



2. Provide a direct connection for traffic desiring to continue on US 421 or to access US 321/221 south or NC 105 west.



3. Improve safety issues associated with both through traffic and local traffic utilizing King Street.



## How does a transportation study originate?

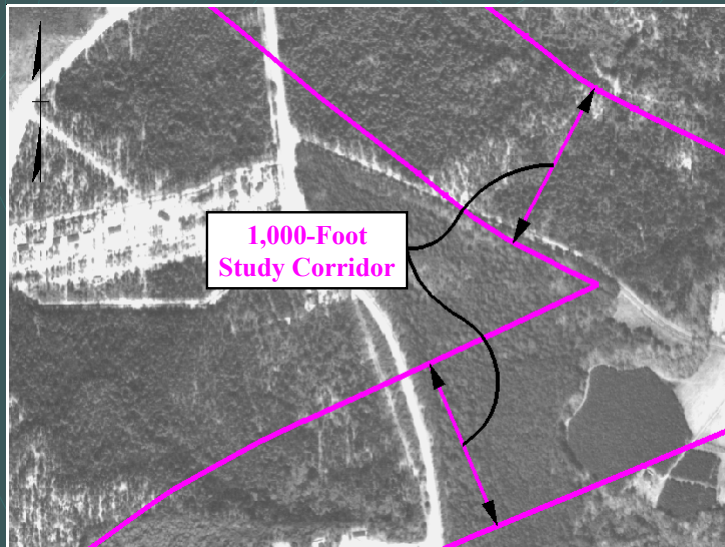
It's a process that takes many years...

1. Identify needs.
2. Local officials propose long-range plan.
3. Submit to NCDOT for study and possible funding.
4. NCDOT schedules and funds the project in the Transportation Improvement Program (TIP).
5. Conduct planning and environmental studies.

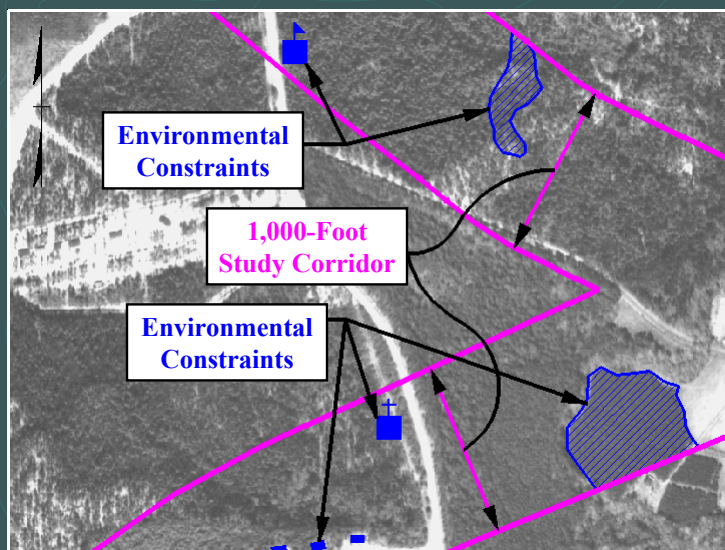




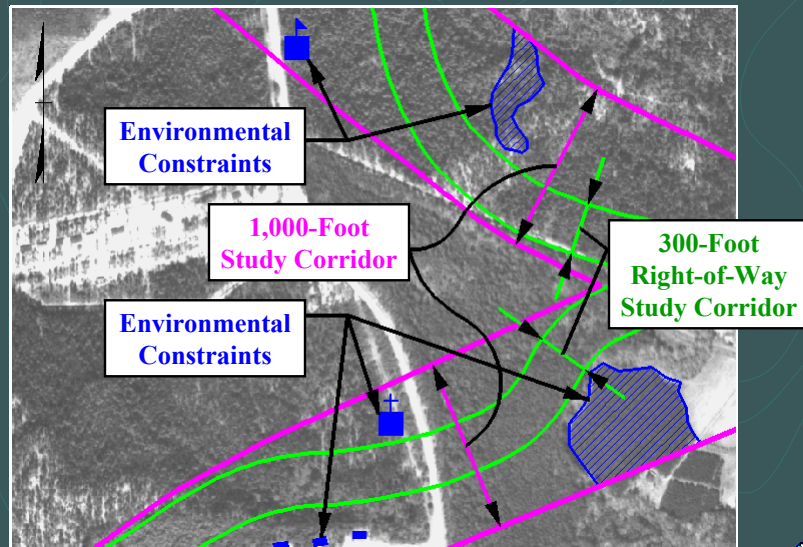
## Evolution Steps in a Highway Alignment



## Evolution Steps in a Highway Alignment



## Evolution Steps in a Highway Alignment



## Project History

- The need for US 421 Improvements has been recognized since the 1970s.
- Recommendations to improve US 421 are included in the Thoroughfare Plans for the Town of Boone and Watauga County.
- A preliminary analysis was conducted by NCDOT in 1997.
- In 1999, a community-based task force was formed to study the options.


## Project History (continued)

- October 2000, the local task force presented its preliminary recommendations for “Daniel Boone Parkway.”
- In 2002, NCDOT announced that in response to local requests, they would study all the alternatives proposed including the task force alternative.
- Tonight we are showing you information on all the alternatives and getting your input to help narrow the number of future study alternatives.



## Where are we in the study process?





The proposed project is not currently funded in the NCDOT Transportation Improvement Program (TIP).

The Pre-TIP Planning Process enables the Project Team to start the Planning and Environmental Study prior to the project being funded in the Transportation Improvement Program (TIP).



## US 421 Project Study Team

- US Army Corps of Engineers
- Federal Highway Administration
- US Environmental Protection Agency
- US Fish and Wildlife Service
- Tennessee Valley Authority
- North Carolina Department of Transportation
- North Carolina Department of Environment and Natural Resources
- North Carolina Wildlife Resources Commission
- North Carolina Department of Cultural Resources
- Local Planning Organization- High Country RPO



# Planning and Environmental Studies



Photos courtesy of  
Boone Chamber of  
Commerce.



## What is a Planning and Environmental Study?

- Reasonable and Feasible Alternatives
- Adverse & Beneficial Impacts to the Human and Natural Environment
- Citizen Participation
- Used by the NCDOT and FHWA







# The Environmental Review Process

- Step 1 - Verify Need and Purpose
- Step 2 - Determine Alternative Routes

*The following steps will occur after the project is funded in the TIP.*

- Step 3 - Perform Detailed Study
- Step 4 - Coordinate with Other Agencies
- Step 5 - Prepare Draft Environmental Report
- Step 6 - Hold Public Hearing
- Step 7 - Choose a Preferred Alternative
- Step 8 - Prepare and Distribute Final Environmental Report



## During this study....

- Step 1 - Verify Need and Purpose
- Step 2 - Determine Alternative Routes

### Then...

A report will be written documenting how the alternatives to be studied further were selected.



## After this study....

After the project gets funded, the rest of the steps in the Planning and Environmental Study can be completed.

It is not known when the project will be funded in the Transportation Improvement Program (TIP).



## Development Process for a Roadway

- Identify in Thoroughfare Plan, Preliminary Environmental Review
- Request Funding in Transportation Improvement Program (TIP)
- Environmental Process: Part 1, Narrow Options to a Few Corridors
- Funding in TIP
- Environmental Process: Part 2, Select Final Corridor
- Right-of-Way Plans
- Right-of-Way Acquisition; Final Design Plans
- Construction

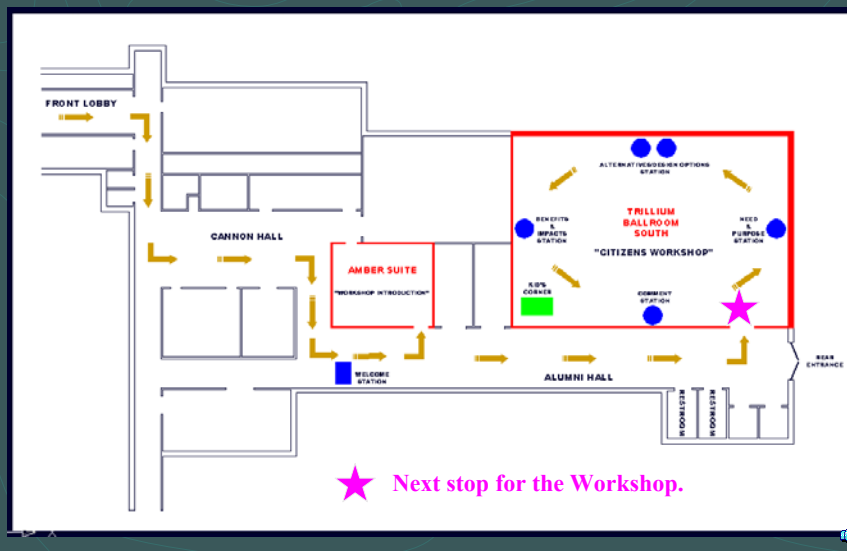


We are holding this Citizens Informational Workshop to gain a better understanding of what citizens are looking for from the proposed project.

This will help the Project Team to narrow the number of future study alternatives.



## Workshop Layout Broyhill Inn and Conference Center







Thank you for  
participating!



Slideshow will repeat in  
5 minutes.



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## **- STATION TWO -**

# **“NEED FOR AND PURPOSE OF THE PROPOSED PROJECT”**

Note: Also shown Figure 4:  
Projected Capacity Deficiencies and  
Figure 6: Corridor Alternatives



## **NEED FOR AND PURPOSE OF THE PROPOSED PROJECT**

- Reduce the mixed use of US 421 (King Street) through downtown Boone by local and through traffic;
- Improve roadway system linkages by providing a more direct connection between US 421 and US 321/US 221 to the south and NC 105 to the west;
- Improve traffic flow along US 421 and the other major roadways in the area; and
- Improve safety along US 421 (King Street) and the other major roadways in the area.



**- STATION THREE -**

**“ALTERNATIVES”  
and  
“DESIGN OPTIONS”**

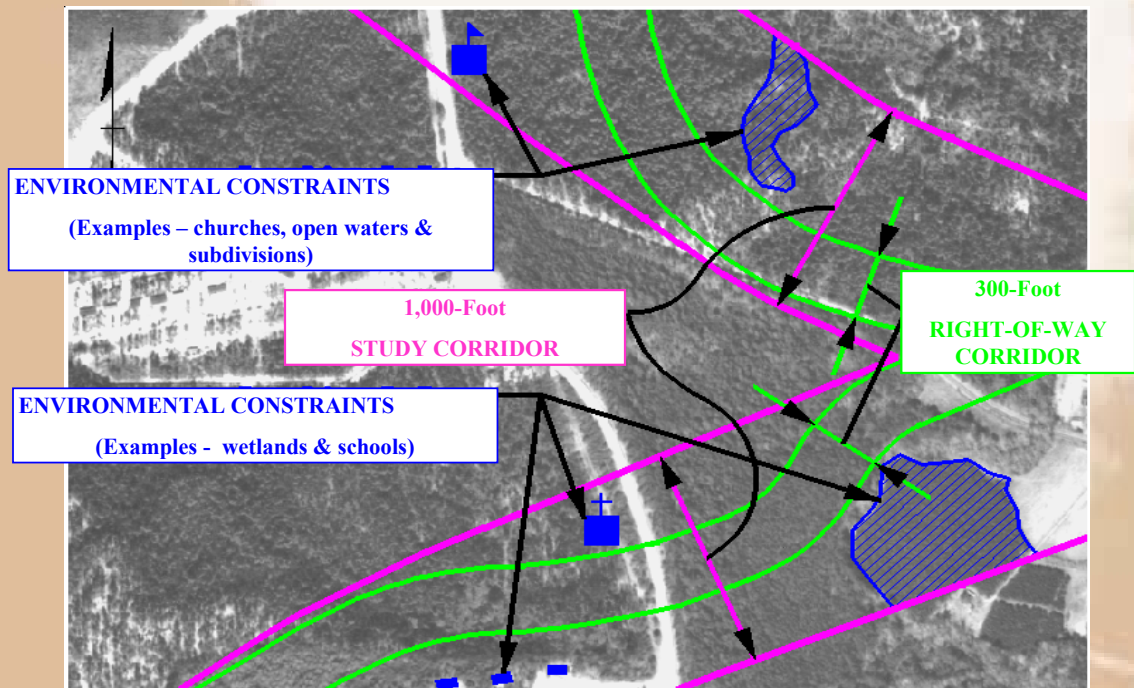
Note: Also shown Figure 6c:  
Corridor Alternatives (1000-ft  
Study Corridors)



# CORRIDOR LIMITS

## Versus

# RIGHT-OF-WAY LIMITS



Within the 1,000-Foot Study Corridor, environmental constraints such as natural features, community facilities, historic structures, subdivisions, etc. are avoided while determining the location of the 300-Foot Right-of-Way Corridor, where the alignment could be constructed in the future.



# DESIGN OPTIONS

These design options represent a range of possibilities, let us know what is important to you. Some considerations during the design process include:

- Typical Cross Sections** – Decisions made on number of travel lanes; width of median; whether the median is landscaped or closed with a barrier; and many other design features.

- Context Sensitive Designs** – All stakeholders work together to develop a transportation facility that fits its physical setting and preserves important features, while maintaining safety and mobility.

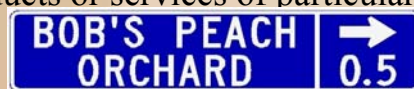
- Scenic Byway Designation** -



- Noise Walls** -



- TODS Program** -Tourist Oriented Destination Signs provide North Carolina businesses an opportunity to place their name on an official sign marketing products or services of particular interest to tourists.



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## **- STATION FOUR -**

### **“BENEFITS AND IMPACTS”**

Note: Also shown Figure 6b:  
Corridor Alternatives and  
Environmental Data



## BENEFITS AND IMPACTS

- All of the Corridor Alternatives except Corridors 7 and 8 must be combined with either 1N, 2N, or 5N to complete the connection to US 421 west of Boone.
- A Right-of-Way width of 300 feet within the 1,000-foot Study Corridor was assumed for the Corridor Alternatives located on new location. A Right-of-Way Width of 150 feet was assumed for Corridor Alternative 8, which is improving the existing US 421 (King Street).
- Hazardous materials sites include National Pollutant Discharge System Sites, Hazardous Waste Facilities, Solid Waste Facilities, and recorded Groundwater Incidents.
- Project 2020 Traffic Benefits is based on an estimated range of the Average Daily Traffic expected to use the new or upgraded road.
- All of the impacts shown are calculated from known GIS mapping sources. Field-truthing of the study area will occur prior to final calculation of any impacts for decision-making.



# EXAMPLES OF CONCERNS AND ENVIRONMENTAL FEATURES

- Relocation of residences, businesses, and community facilities
- Protected species including presence of suitable habitat
- Important farmland
- Low income and minority populations
- Wetlands and unique natural areas
- Hazardous waste sites
- Economic development trends
- Surface water / drinking water quality
- Cultural resources
- Safety issues
- Terrestrial and aquatic communities
- Air quality
- Community cohesion and travel patterns
- Rivers, streams and riparian buffers
- Location of community facilities (such as schools, churches, and parks)
- Noise impacts
- Detouring of emergency services and school buses
- Floodplains
- Local utilities
- Indirect and cumulative long-term impacts
- Temporary construction impacts



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## Benefits and Impacts of Alternative Corridors

### US 421 Improvements/ Daniel Boone Parkway

SUBJECT TO CHANGE

	CORRIDORS														
CATEGORY	7	8	1	1A	1B	2	2A	2B	3	5	6	6A	1N	2N	5N
Length (miles)	5.0	4.2	4.4	4.4	4.4	5.8	5.7	4.6	7.7	8.7	7.5	6.4	1.7	1.6	2.6
Number of Interchanges	3	0	Corridors 1-6A each are planned to have 3 interchanges										1	1	1
Parcels Taken or Partially Impacted	281	316	240	270	251	245	284	238	325	345	281	227	245	148	97
Structures (Residents or Businesses)	207	176	184	218	182	171	207	174	121	141	134	116	213	136	34
Public Schools	Each corridor either impacts no schools or impacts 1 school.														
Parks	Each corridor either impacts no parks or impacts 1 park.														
Churches	3	5	Corridors 1 - 6A each impact either no churches or impacts 1 church.										3	1	2
Cemeteries	No cemeteries are expected to be impacted by any of the corridors.														
National Register Historic Structures	No national register historic structures are expected to be impacted by any of the corridors, except Corridor 8.														
Natural Heritage Occurrence Sites (Known Federal Listed Species Habitat)	Each corridor either impacts no natural heritage occurrence sites or impacts 1 to 2 natural occurrence sites.														
FEMA 100 Year Floodplain Impacts (acres)	8.1	1.4	45.9	61.1	27.5	40.2	53.1	22.1	25.3	32.6	45.2	42.1	1.7	3.8	0.8
Hazardous Material Sites	3	5	2	2	2	4	4	2	1	2	2	2	2	0	0
National Wetlands Inventory-Wetland Impacts (acres)	Each of the corridors impacts less than 1 acre of wetlands.														
Number of Stream Crossings	4	4	6	10	4	5	9	4	5	6	7	5	1	3	3
Length of Stream Within the Corridor (miles)	0.5	0.2	1.5	2.5	1.3	1.1	1.9	1.0	1.2	1.2	2.0	1.4	0.4	0.6	0.7
Projected 2020 Traffic <i>BENEFITS</i>	Low	Low	High	High	High	High	High	High	Med-ium	Med-ium	Med-ium	Med-ium	The benefits of Corridors 1N, 2N, & 5N are similar.		
Estimated Cost (millions)	127	137	114	95	114	136	110	127	147	208	241	152	47	36	52

Source: Geographic Information Systems (GIS) data from the Center for Geographic Information and Analysis (CGIA) and various agencies.



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Boone - US 421 Project  
Watauga County  
TIP No. U-2703

## PRE TIP COMMUNITY STUDY

Prepared for:

**North Carolina Department of Transportation  
Office of Human Environment**



Prepared By:

URS Corporation - North Carolina  
1600 Perimeter Park Drive  
Morrisville, North Carolina 27560

February 2005

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## Executive Summary

The North Carolina Department of Transportation is conducting a Pre-TIP Community Study of the US 421 corridor in the vicinity of Boone in Watauga County. The purpose of this study is to determine the US 421 transportation solution that best fits the area's future community goals and transportation needs. The study is currently considering modifications to the existing roadway and the construction of a new roadway, away from the downtown area, on several possible alignments. Key sections of the report are listed below.

- The Study Area Impact Analysis

The impact analysis evaluated eight impact categories: social & psychological, physical, visual and aesthetic, land use compatibility, mobility and access, provisions of public service, safety, and potential displacements. Each impact category has a set of key concepts and questions used to evaluate the impacts. A matrix is then used to show the likely level of impact to the categories for each possible alignment. Finally, following the matrix there is a discussion of possible alignments that have a high adverse effect for that impact category. In addition, a summary table is provided on these impacts for each possible alignment in Table 13 in the document summary.

- Economic Impact Analysis

This analysis used three case studies in which highway bypasses were built around central business districts in locations similar to Boone and were determined to be good estimates of the likely magnitude of effects associated with this project. From the case studies, economic impact criteria and key findings were developed for use in the analysis process. A field survey was also conducted that identified area businesses and determined whether a businesses depends primarily on pass-by traffic, is a specific destination, or caters to every-day family shopping needs. Using the key findings from the case studies and results of the business survey, the economic impact analysis was then completed for the alternatives.

- Environmental Justice

The goal of this analysis is to identify possible EJ areas that have a number of low income or minority residents that is a meaningful difference from the average of the study area. The intent at this juncture is to provide a foundation for future and more stringent analyses in the planning and preparation of the transportation project. The Council for Environmental Quality (CEQ) provides guidelines for EJ in the NEPA documentation that will occur later stages of the transportation planning process.

- Indirect and Cumulative Effects

This section specifically addresses impacts from a community perspective by evaluating the relationship between transportation, land use, and the social, psychological, physical, visual, mobility, safety, and economic aspects of affected communities. A more refined ICE assessment will need to be conducted for the proposed transportation project once alternatives have been identified for analysis under NEPA.

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## **APPENDICES**

Appendix A:	Correspondence
Appendix B:	Demographic Tables
Appendix C:	Business Survey

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## 1. Preface

The North Carolina Department of Transportation is conducting a Pre-TIP Study of the US 421 corridor in the vicinity of Boone in Watauga County. The purpose of this study is to determine the US 421 transportation solution that best fits the area's future community goals and transportation needs. The study is currently considering modifications to the existing roadway and the construction of a new roadway, away from the downtown area, on several possible alignments. The Pre-TIP Study is adhering to the National Environmental Policy Act (NEPA) requirements for benefit and impact analysis to allow integration with further expected processes if the project is funded.

The Pre-TIP Study is following the decision making steps outlined in North Carolina's NEPA/Section 401 Merger process. A decision making group, known as the Merger Project Team and made up of agency representatives was formed to shepherd the project through the process. The merger process benefits inter-agency coordination and facilitates the balancing of transportation needs and environmental quality. In step one, the Merger Project Team agreed upon the need for and the purpose of the project and specific wording to detail this agreement. The next step is for the Merger Project Team to select which project alternatives should be carried forward for further study.

NCDOT has prepared this Precursory Community Impacts Assessment (CIA) in support of the Pre-TIP Study. The information presented in this Pre-TIP Community Study is intended to be used in the screening and identification of alternatives to be carried forward for detailed study. Specifically, the Pre-TIP Community Study is intended to provide the Merger Project Team and the Public with information regarding characteristics of the study area and the potential positive and negative effects of each preliminary alternative corridor on the surrounding community.

The assessment presented in this document applies the elements of the community impact assessment process and is not intended to identify specific project impacts but rather to identify the relative impacts and benefits of each preliminary alternative corridor to the community at large. This is accomplished by taking into account key elements of importance to the community and its residents such as mobility, safety, employment, relocation, isolation, and other community issues.

The sections of the report are divided as follows:

- Introduction
- Project background information and summary of the purpose and need
- Description of the study area
- Description of the assessment process
- Description of Community Characteristics, which includes information on
  - Unique feature and qualities
  - Demographics

- 
- Public facilities and services
    - Land use and development plans
    - Transportation plans
    - Neighborhoods
  - Analysis of potential impacts from the alternatives
  - A qualitative assessment of potential economic impacts
  - Potential environmental justice issues
  - Indirect and cumulative effect
  - Summary of impacts and discussion on possible solutions

---

## 2. Introduction

The purpose of this document, to the extent reasonable and practical, is to evaluate the effects, on the community and its quality of life, which may result from each of the proposed transportation solutions. These solutions as a group shall be referenced in this report as the US 421 project. Potential impacts include matters of importance to community residents such as mobility, safety, employment effects, relocation, isolation, and other community issues. Taking into account these key elements during the earliest phases of the transportation decision-making process will help ensure that the outcome of the project will meet the community's best interests and are not in conflict with its values, goals, or plans.

The efforts covered under this precursory assessment are similar to those that would be undertaken for a Community Impact Assessment, but will not be carried to the same level of detail. Instead, the focus of the report will be on data collection and cursory discussion of the potential impacts of each project alternative. It is expected that the data and analyses presented can be refined throughout the project planning and development process.

This document will expand on the known NCDOT project information. Information and data for this assessment were obtained through field visits, interviews with local officials (Appendix A), GIS data, and other sources for community information. The community impact assessment process is a legal requirement supported by major federal regulations, statutes, policies, technical advisories, and Executive Orders.<sup>i</sup>

The following sections of this document include a description of the project and its background, the assessment process, identification of community characteristics, an analysis of the potential impacts, and the identification of solutions.

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<sup>i</sup> The guidelines and procedures followed throughout this process are based on the, *Community Impact Assessment: A Quick Reference for Transportation*, published by the Federal Highway Administration Office of Environment and Planning in 1996, while also considering guidance from the following sources:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA),
- National Environmental Policy Act of 1969 (NEPA),
- Title VI of the Civil Rights Act of 1964 and related statutes,
- 23 USC 109 (h) Federal-Aid Highway Act of 1970, 23 CFR 771,
- Environmental Impact and Related Procedures (1987),
- TA 6640.8A (1987) Guidance for Preparing and Processing Environmental and Section 4(f) Documents,
- Executive Order (EO) 12898 on Environmental Justice (1994) and proposed Department of Transportation Order on Environmental Justice (1996),
- Farmland Protection Policy Act (1981), as amended in 1994 (7 CFR 658),
- Uniform Relocation Assistance and Real Property Acquisition Policies Act (1970, referred to as the Uniform Act,) as amended in 1987,
- FHWA Environmental Policy Statements (1990 & 1994), and
- Recommendations of the President's Council on Sustainable Development.

## 12. Summary

The purpose of this Pre-TIP Community Study is to provide project decision-makers with information regarding Boone's community characteristics and the potential positive and negative effects on the community that could result from proposed modifications to US 421 in Boone. The information presented is intended for use in the screening and refinement of the preliminary alternatives associated with the Boone - US 421 project.

The assessment presented in this document applies the elements of the community impact assessment process and is not intended to identify specific project impacts but rather to identify the relative impacts and benefits of each alternative to the community at large. This is accomplished by taking into account key elements of importance to the community and its residents such as mobility, safety, employment effects, relocation, isolation, and other community issues.

Prior to an analysis of potential impacts it is first necessary to define the context of the community. Defining the study area and identifying the community's characteristics achieve this. It is important to understand that the study area is located in a mountainous region of western North Carolina. The natural beauty of the area and its proximity to recreational activities such as skiing, hiking, rafting, etc. are influential factors in the attractiveness of the area and as such, the economy of the region is largely dependent on tourism. It is also important to note that the majority of the residents of Boone are students at ASU. This has a major impact on the demographic and housing characteristics of Boone and Watauga County. The City of Boone is the county seat of Watauga County and is the primary cultural and economic center of the region.

The study area impact analysis presented in Section 6 evaluates the preliminary alternative corridors for potential impacts to eight study area characteristics:

- Social and Psychological



- 
- Physical
  - Visual and Aesthetic
  - Land Use Compatibility
  - Mobility and Access
  - Provision of Public Services
  - Safety
  - Potential Displacements

Table 13 presents a summary of potential impacts by alternative for these study area characteristics by preliminary alternative corridor.

**Table 13: Summary of Potential Impacts**

Impact Summary	Corridor Alternative											
	1	1A	1B	2	2A	2B	3	5	6	6A	7	8
Social and Psychological	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Physical	High	High	Mod	Mod	Mod	Mod	Mod	Mod	Low	Mod	High	Mod
Visual and Aesthetic	Ne	Ne	Pos	Ne	Pos	Ne	Ne	Low	Low	Low	High	High
Land Use Compatibility	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Low	Low	Low	Ne	Ne
Mobility and Access	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Mod
Provisions of Public Service	High	High	Low	Pos	Pos	Low	Ne	Ne	High	Ne	Low	Low
Safety	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne	Ne
Potential Displacements	Mod	Mod	Mod	Mod	Low	Mod	Low	Mod	Mod	High	High	Mod
West End Corridor Alternative												
	5N	1N	2N									
Social and Psychological	Low	Low	Low	<p><b>KEY:</b>  Low = Low Adverse Effect  Mod = Moderate Adverse Effect  High = High Adverse Effect  Pos = Positive Effect  Ne = Negligible Effect</p> <p>The summary rating was computed by averaging the key characteristics of each impact category based on the rating they were given in the Study Area Impact Analysis (Section 6). The ratings used are: High Adverse Impact (High), Moderate Adverse Impact (Mod), Low Adverse Impact (Low), Negligible Effect (NE), and Positive Effect (Pos). In order to average each of these were given a numerical score using the following scale: High &gt; 2.5, Mod 1.5 to 2.4, Low .5 to 1.4, Ne -.5 to .4, and Pos &lt; -.5.</p>								
Physical	Mod	Mod	Mod									
Visual and Aesthetic	Ne	Ne	Ne									
Land Use Compatibility	Ne	Ne	Ne									
Mobility and Access	Ne	Ne	Ne									
Provisions of Public Service	Mod	Mod	Mod									
Safety	Ne	Ne	Ne									
Potential Displacements	Low	Mod	Mod									

**NOTE: Refer to Figure 6: Corridor Alternatives for a map of the alternatives referenced here.**

---

A qualitative economic impacts analysis is presented in Section 7. The impacts from modifications to US 421 can be classified into four categories, based on the general location of the preliminary alternative corridors, which are rural, urban commercial, urban central business district, and urban residential. The potential economic impacts for each of the alternatives in these four categories are summarized below.

Rural: (Corridor Alternatives 3, 5, 6, 1N, 2N, & 5N)

- Would increase access to areas outside of Boone's urban area, which could induce change in land use and density of development.
- Development could include industrial, commercial, or residential uses.
- Property values in the rural areas would likely increase as development intensified.
- Businesses located in downtown Boone would not likely be impacted by a rural alternative since, the overwhelming majority of businesses are categorized as destination businesses.
- While there are a large number of the businesses along the US 221/321 corridor in Boone, a relatively small number are dependant on pass by traffic. Given the expected decrease in pass through traffic, there may be a decrease in business. This corridor is not likely to experience a substantial drop in traffic because of its status as a regional center for shopping, medical needs, and other personal services.

Urban Commercial (Corridor Alternatives 1, 1A, 1B, 2, 2A, 2B, & 6A)

- With the existing density of development, there is a strong likelihood that there will be some relocation of businesses required.
- Future demand for land in the area would increase and likely result in infill and higher density development.
- The employment level for the area would not be considerably altered, but lack of available land would likely increase property values.
- Current businesses located in downtown Boone would not likely be impacted from an urban commercial alternative.
- Businesses along the US 221/321 corridor that are dependent on drive by traffic may experience an increase in customers due increased traffic from the urban commercial alternatives.

Urban Residential (Corridor Alternative 7)

- It is expected that the increase in access to the area would create a higher demand for land and increase development and property values along the corridor.
- Additional residential units would be likely in this area.

- 
- The existing businesses in this area would most likely experience an increase in business from the added exposure, and additional businesses, which cater to highway traffic, may also be developed.
  - A large increase in business activity or employment levels in this area is not expected.
  - Current businesses located in downtown Boone would not likely be impacted.
  - Businesses depending on pass through traffic along the US 221/321 corridor may experience a slight decrease in customers.

#### Urban Central Business District (Corridor Alternative 8)

- It is likely that this alternative would increase pressure for available land, which could drive up real estate prices.
- It would like cause a change in the type of businesses to reflect those which will cater more to drive by traffic and less to destination businesses. This change would not likely have an impact on employment levels for the area.
- While there are a substantial number of the businesses along the US 221/321 corridor in Boone, a relatively small number are dependant on pass by traffic. Given the expected decrease in pass through traffic, there may be a decrease in business. This corridor is not likely to experience a substantial drop in traffic because of its status as a regional center for shopping, medical needs, and other personal services.

An analysis of block groups within the study area indicated areas of low income and minority populations. Because of the affects of the ASU student body on the demographics of the area it is difficult to determine at this level of analysis if any of the alternatives would involve Environmental Justice issues.

Potential indirect and cumulative effects would vary, based on the general location of the preliminary alternative corridors. The rural corridors have the highest potential to induce changes in land and shifts in population, as they will increase access to areas outside of Boone's urban area.

The urban commercial alternatives will redirect traffic through a densely developed area of Boone. Even though travel patterns will change as a result of these alternatives, local effects of the project should be limited to marginally enhanced development potential in the project corridor.

The urban residential alternative would displace a relatively high number of residents, removing housing capacity from an already tight housing market. Project induced development would be limited in this corridor due to the steep mountainous terrain to the north and build-out conditions to the south. Land use changes possible as a result of this alternative include highway oriented retail development at new intersections, possibly replacing existing housing.

The urban central business district alternative would involve widening of the facility through downtown and would more than likely result in the loss of on-street parking. Possible impacts include a loss of community cohesion and decreased economic viability

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of downtown businesses in their current use. By widening the corridor, pedestrian mobility will be impacted and business will be more difficult to access. Also, the loss of on-street parking will require additional off street parking for downtown businesses. Parking in the downtown is currently very constrained. Adding additional parking for downtown businesses will increase the pressure for available land and drive up real estate prices.

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